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Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XVI. CHICAGO, ILL., MAY, 22, 1915. Number 2

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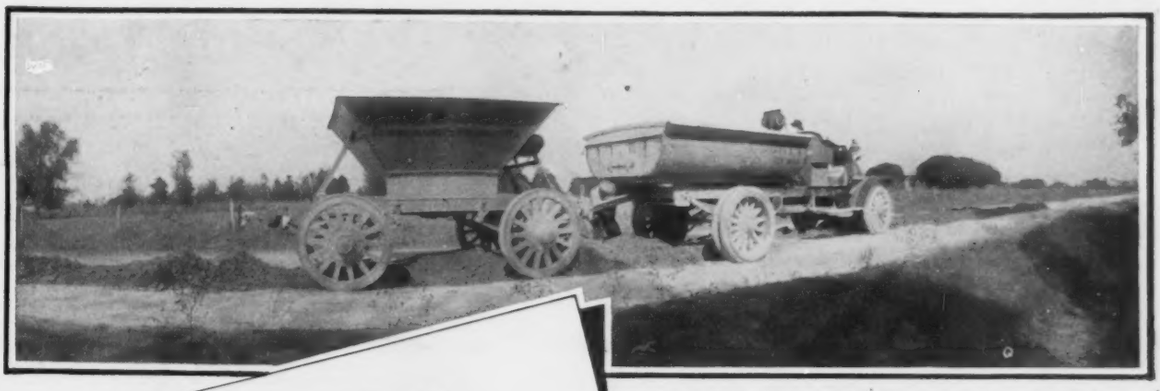
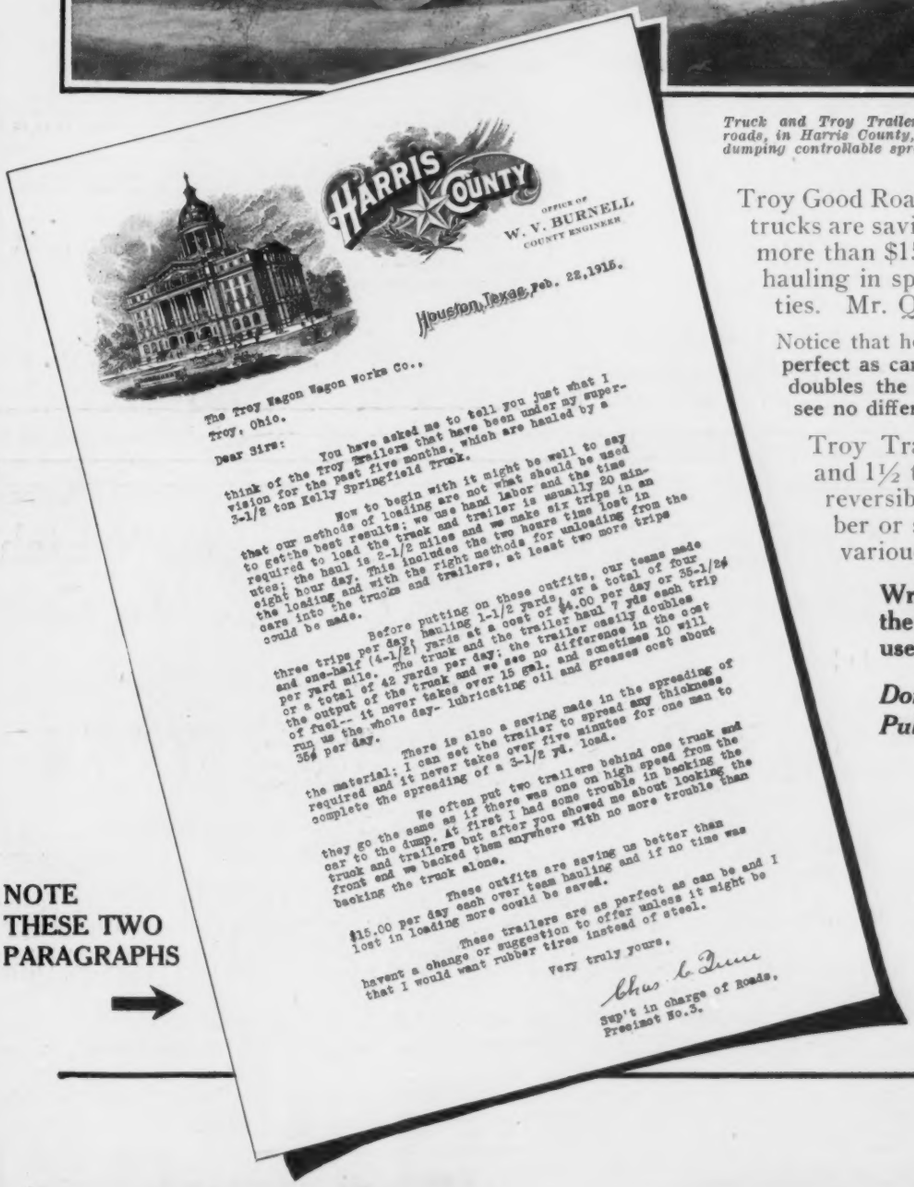
MA

Making Good In Making Good Roads



Truck and Troy Trailer doing real work for the cause of good roads, in Harris County, Texas. Trailer is equipped with cross-dumping controllable spreading doors.



HARRIS COUNTY

OFFICE OF
W. V. BURNELL,
COUNTY ENGINEER

Houston, Texas, Feb. 22, 1915.

The Troy Wagon Works Co.,
Troy, Ohio.

Dear Sirs:

You have asked me to tell you just what I think of the Troy Trailers that have been under my supervision for the past five months, which are hauled by a 3-1/2 ton Kelly Springfield Truck.

Now to begin with it might be well to say that our methods of loading are not what should be used to get the best results; we use hand labor and the time required to load the truck and trailer is usually 20 minutes; the haul is 2-1/2 miles and we make six trips in an eight hour day. This includes the two hours time lost in the loading and with the right methods for unloading from the care into the trucks and trailers, at least two more trips could be made.

Before putting on these outfits, our teams made three trips per day, hauling 1-1/2 yards, or a total of four and one-half (4-1/2) yards at a cost of $4.00 per day or 38-1/2¢ per yard mile. The trailer easily doubles the output of the truck and we see no difference in the cost of fuel-- it never takes over 15 gal. and sometimes 10 will run us the whole day- lubricating oil and greases cost about 35¢ per day.

There is also a saving made in the spreading of the material; I can set the trailer to spread any thickness required and it never takes over five minutes for one man to complete the spreading of a 3-1/2 yd. load.

We often put two trailers behind one truck and they go the same as if there was one on high speed from the car to the dump. At first I had some trouble in backing the truck and trailers but after you showed me about hooking the front end we backed them anywhere with no more trouble than backing the truck alone.

These outfits are saving us better than $15.00 per day each over team hauling and if no time was lost in loading more could be saved.

These trailers are as perfect as can be and I havent a change or suggestion to offer unless it might be that I would want rubber tires instead of steel.

Very truly yours,

Chas. L. Dunn
Sup't in charge of Roads,
Precinct No. 3.

NOTE THESE TWO PARAGRAPHS

Troy Good Roads Trailers behind 3½ ton trucks are saving Harris County, Texas, more than $15.00 a day each over team hauling in spite of poor loading facilities. Mr. Quinn's letter tells how.

Notice that he says **"These Trailers are as perfect as can be" and "The Trailer easily doubles the output of the truck and we see no difference in the cost of fuel."**

Troy Trailers are 5 ton, 2½ ton and 1½ ton capacity. Larger sizes reversible or non-reversible. Rubber or steel tires. Bodies to suit various needs.

Write for Booklet No. 4 RP, the first ever published on the use of Trailers.

Don't Pile it,
Pull it—in a TROY.

The Troy Wagon Works Company

Troy, Miami County, Ohio

New York, 50 Church Street
Philadelphia, 702 Abbott Bldg.
Detroit, 319 Hammond Bldg.
London, England, 49 Pall Mall

Troy Trailers

MAXECON

Means MAXimum of ECONomy

Years of experience with the assistance of our hundreds of customers has found THE SOLUTION OF GRINDING HARD MATERIALS. The MAXECON PULVERIZER combines highest EFFICIENCY, greatest DURABILITY and assured RELIABILITY, Uses the LEAST HORSE POWER per capacity. Embodies the features of our Kent Mill with improvements that make it MAXECON.

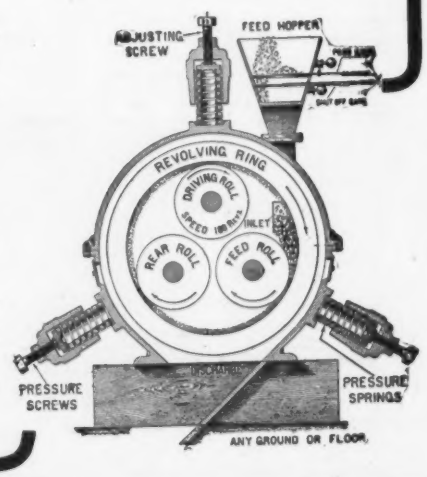
WE DO NOT CLAIM ALL of the CREDIT for this achievement

We have enjoyed the valuable suggestions of the engineers of the Universal Portland Cement Co. (U. S. Steel Corp.), Sandusky P. C. Co., Chicago Portland C. Co., Marquette Cement Mfg. Co. Western P. C. Co., Cowham Engineering Co., Ironton P. C. Co., Alpena P. C. Co., Castalia P. C. Co., Pennsylvania P. C. Co., and many other patrons.

THE RING WOBBLES

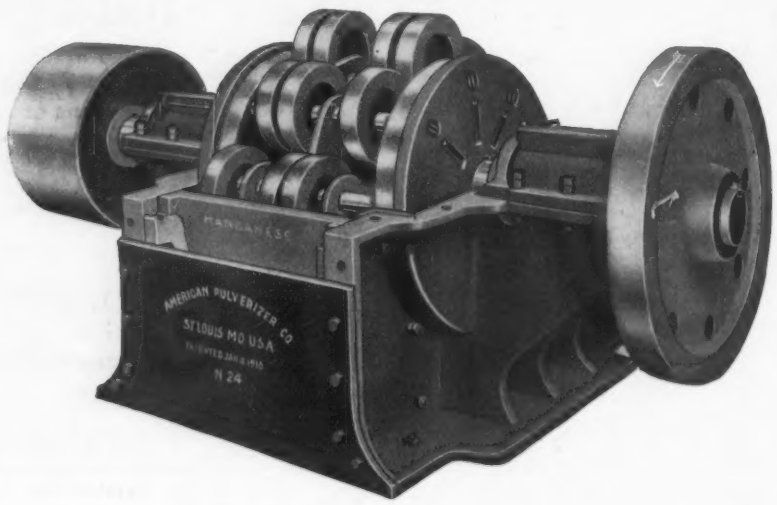
The FREE WOBBLING POUNDING RING instantly and Automatically ADAPTS its position to the variations of work.

Its GRINDING ACTION is DIFFERENT than any other; besides the STRAIGHT rolling action of the rolls, the SIDE to SIDE motion of the ring makes the material subject to TWO crushing forces and DOUBLE OUTPUT results.



KENT MILL CO.

10 RAPELYEA ST., BOROUGH OF BROOKLYN, N. Y. CITY
LONDON, W. C., 31 HIGH HOLBORN
BERLIN-HOHENSCHOENHAUSEN



The American Pulverizer

equipped with rings exclusively, for pulverizing limestone or any other refractory materials.

SEE THE DISKS

as are removed from the grinding room and installed in an offset in the housing. The disks and inner housing are protected by chilled iron liners.

The following letter discloses an efficiency that excels in grinding limestone from 2½-inch cubes to meal fineness and under in one operation:

Gentlemen:—

Replying to yours, April 27th, 1915, would say our books show that we have ground over 5,000 tons of limestone with our American Ring Pulverizer and have not expended one cent for repair or replacement.

Yours very truly, *SUGAR RIVER STONE CO.*

GUARANTEED—30 DAYS' TEST. **Get the best—it will prove to be the cheapest.**

WRITE FOR PARTICULARS

American Pulverizer Company, East St. Louis, Illinois

Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XVI. **CHICAGO, MAY 22, 1915.** **Number 2.**

PUBLISHED SEMI-MONTHLY.

DEVOTED TO

Quarry Products, Cement, Lime, Plaster, Sand and Gravel, Clay Products and Building Specialties—Fireproof Building and Road Construction.

THE FRANCIS PUBLISHING COMPANY.

EDGAR H. DEFEBAUGH, Prest.

Seventh Floor, Ellsworth Bldg., 537 So. Dearborn St., Chicago, Ill., U. S. A.
Telephone: Harrison 8086, 8087 and 8088.

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Communications on subjects of interest to any branch of the industry are solicited and will be paid for if available.

Every reader is invited to make the office of Rock Products and Building Materials his headquarters while in Chicago.

Editorial and advertising copy should reach this office at least five days preceding publication date.

TERMS OF ANNUAL SUBSCRIPTION.

In the United States and Possessions.....$1.00
In all other Countries in the Postal Union.....$1.50
Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option.
Advertising rates furnished on application.

Published on the 7th and 22nd of each month.
Entered as second-class matter July 2nd, 1907, at the Postoffice at Chicago, Illinois, under act of March 3rd, 1879.

Reports from the Sunny South indicate immensely improved conditions. Building work and heavy improvements are showing considerable activity.

Every dealer who sells plaster should carry a stock of corner bead and metal lath. These improved specialties are expected in every modern job and the goods pay the dealer a reasonable dividend.

Concrete walks were the first great achievements of the Portland cement industry. The concrete road is but a larger application of the same principle, and it works the same way. When properly done it is always a success, and is just as bad as a bad walk when it is done in a slipshod manner.

The British fleet is so deeply interested in patrolling the entrances of American ports just outside of the line of demarcation in order to keep our commerce properly regulated that there seems to be no units left to convoy her own commerce safely into the home ports. Perhaps we don't know how to regulate our own commerce; anyway, there are some who think so.

Replying to the application for employment by a man who claimed to be able to read railroad tariff and combination ratings correctly, the head of a concern having a very large tonnage recently said: "We are unable at this time to undertake the payment of the salary of a man of the qualifications you describe; indeed, we feel sure that you will have to accept much less than you are worth, regardless of what your pay might be."

A prominent road material man remarked recently that the mileage of penetration method macadam roads in this year's construction will amount to nearly double that on the record of last year or any preceding year. Of course, this may not hold out throughout the country, but applies to Illinois and Indiana particularly.

The big waterway improvement across the great continental divide between Chicago and the Illinois river looks like a certainty at last. Readjustment of freight rates occasioned by the Panama canal has made this connection indispensable to keep the largest industrial and agricultural section of the country upon the commercial map. Incidentally, there will be some five millions dollars worth of work, mostly concrete.

The building trades of Chicago have about decided to organize a permanent chapter of the Sons of Rest. They never were much good, individually or collectively. Now that they have knocked off indefinitely there ought to be a chance for a new deal that will include some worthy citizens who really want to work and give value commensurate with their pay. There are plenty of good men who are hungry for an opportunity in life.

Little is said about the trade of South American countries that formerly dealt heavily with the European belligerents who are now too busy to notice such trifles as foreign traffic. Every barrel of cement and lime that they use must be brought from somewhere, for nature did not put them in the running for such things. These exports ought to count well for some of our mills, provided that there are bottoms to carry the tonnage and gold at the other end to pay the bills.

Don't wait for business to come to you. Get a neat order-taker to keep office for you, and get out to practice salesmanship by stirring up interest in improvements with your own suggestions properly placed. If you don't know how to do this, pitch in and learn. You can never do it any younger than you are now. No dealer has achieved his full growth as a business man until he is able to attract business with his own personality. It is the biggest opportunity of your career, besides you can double your business and your profits as well by growing into bigger things yourself. If you lack imagination, get some friends who has it to give you the suggestions. You will soon cultivate the thing for yourself. Anyway, try once. It will pay.

The farmers who began to hang their triangle mesh wire fencing upon concrete posts seven years ago have now got the laugh on their neighbors who bought cedar posts at the same time for about 10 per cent less than the concrete posts cost then. The concrete posts are doing business just a little better than they were when first put in, while the neighboring farmer is buying new cedar posts and paying 10 per cent more than the concrete posts cost, and his wire is all twisted and lost as an item of good measure for the poor judgment he used in sticking to old ideas when he would not have missed the difference in cost a good while ago. This item is worth passing on to the attention of some farmer friend who could use the hint contained profitably.

WITH YOU and ME

Edward L. Hynson, a material dealer of Portland, Ore., was married last week to Miss Irene M. Butler, of Harrison, Idaho.

S. T. Crapo, president of the Huron Portland Cement Co., Detroit, Mich., has been re-elected president of the Michigan Manufacturers' Association.

Robert Nesch, president of the Pittsburgh Paving Brick Co., Kansas City, Mo., recently returned to his desk after an illness of three weeks at his home. Mr. Nesch says that he is now feeling much better and that the business is progressing in fine style.

The directors of the Whiteselle Brick & Lumber Co., Corsicana, Texas, recently elected the following officers: J. E. Whiteselle, president; Max D. Almond, vice-president and general manager; J. L. Whiteselle, vice-president, and W. C. Oldham, secretary and treasurer.

H. H. Crowell has succeeded A. J. Hazelton as manager of the Hydraulic Press Brick Co. at Kansas City, Mo. Mr. Hazelton resigned about a month ago to go into business for himself, it is stated. J. B. Broering, superintendent of the concern, is at the plant at Diamond Station, Mo.

Charles E. Card, who has been in the roofing contracting business on his own account for some time, has joined the Breese Bros Co., 119 North Third street, Louisville, Ky. This concern handles a full line of building material and regards the accession of Mr. Card as a good stroke.

T. L. Coonly, of Chicago, vice-president of the Link Belt Co. and president of the Link-Belt Dodge Pulley Co., recently was in Seattle. In company with the Northwestern representative, L. W. Shirley, he went to Vancouver, Spokane and Portland. From Portland he went on South to attend the Panama-Pacific exposition at San Francisco.

About 125 members of the Engineers' Club of Trenton, N. J., were guests of the Alpha Portland Cement Co. May 8. The company provided a special train of four Pullmans, which arrived at the Martin's Creek, Pa., plant at 10:15 o'clock. After a trip to the quarry and a complete inspection of the workings of the mill, the visitors went to Easton, arriving there at 12:30 o'clock. At 1:00 o'clock an excellent luncheon was served in the banquet hall of Seip's cafe. The hall and tables were prettily decorated. At 3:00 o'clock the guests took their special for home.

George C. King, who for the last five years has had charge of the terminals of the Omaha and Northwestern railroad companies in Sioux City, Ia., has become connected with the Sioux River Sand Co., taking charge of the operating department of the new concern. The sand company is to open a deposit lying beneath some 400 acres of land. It is a project that will require the building and operation of a tramcar system and in the development of this system Mr. King's immediate attention will be engaged. His 21 years of service with the railroads and his particular education in the development of the terminals will make him a valuable aid in the development of this project.

Clinton B. Rogers, assistant credit manager of the Lehigh Portland Cement Co., has been appointed sales manager for Northwestern territory with headquarters at Spokane, Wash., the appointment to take effect immediately. Mr. Rogers entered the building material field in 1902 as clerk in the office of the National Fireproofing Co., Boston, Mass. After several years of service there and in its Pittsburgh, Pa., office he was transferred to Cleveland and later to Columbus as resident manager. In February, 1912, Mr. Rogers entered the employ of the Lehigh Portland Cement Co. as traveling representative in Kentucky territory. His excellent accomplishments and fine personality won for him in January, 1913, the appointment of special representative of Cincinnati, Ohio. In December, 1914, Mr. Rogers was assigned to the position of assistant credit manager and removed to the main Western office of the Lehigh company at Chicago, Ill. During Mr. Rogers' association in the building material business he has gained a wide acquaintanceship and a host of friends, who wish him every success in his new field.

CLINTON B. ROGERS.

Reece Bailey has joined the sales force of the Dexter Portland Cement Co., and will be located at Philadelphia with offices in the Land Title building.

June 22-26.—American Society for Testing Materials, eighteenth annual convention, Traymore hotel, Atlantic City, N. J.

Aug. 31-Sept. 3.—Good Roads Congress to be held by Tri-State Good Roads' Association, San Francisco, Calif.

Sept. 20-25.—Pan-American Road Congress to be held by American Road Builders' Association and American Highway Association, Oakland, Calif.

Fred B. Banks has been re-elected general manager of the Bath Portland Cement Co., Bath, Pa.

A. P. Robinson, formerly with the W. E. Austin Machinery Co., Atlanta, Ga., of which he was vice-president and chief engineer, has become manager of sales of the Insley Manufacturing Co., Indianapolis, Ind., manufacturers of contractors' equipment, of which Mr. Robinson is an expert salesman.

Edwin Healey, 21 years old, son of Edwin S. Healey, secretary of the Glencoe Lime & Cement Co., St. Louis, Mo., while walking with a party of friends was hit by a westbound Frisco accommodation passenger train near the Valley Park station April 17 and was seriously injured, suffering from contusions on the head, a compound fracture of the right leg and was injured internally. Witnesses said that he was thrown into the air and fell in front of the engine, whence he was hurled to the side of the tracks. He was hurried to the Frisco hospital on the same train that struck him and his life was despaired of for several days. Mr. Healey is now out of the hospital and well on the road to recovery. He will not be crippled and but slightly disfigured.

Osborn Van Brunt, for 10 years traffic manager of Simmons Hardware Co., of St. Louis, became manager of traffic and railway sales of the General Roofing Manufacturing Co., of that city, the first of April. This is a new department in the organization of the General Roofing Manufacturing Co., which has been made necessary by the growth and expansion of the business. Heretofore each mill has had an independent traffic manager and no special effort has been made toward combining the railroad sales with the traffic department of the mills. Under the new arrangement, Mr. Van Brunt will not only supervise the traffic work of the entire company, but will also form a railroad sales organization to cultivate more intensively the sale of the company's products to the railroads.

J. M. Vollmer, secretary of the Louisville Builders' Exchange; H. L. Lewman, president of the National Association of Builders' Exchanges; Alfred Struck, a prominent builder and president of the Alfred Struck Co., were among those present at the annual meeting of the Employers' Association of Louisville and Kentucky recently held at the Watterson hotel. Ideas for mutual improvement of industrial conditions for employer and employe through educational channels and through the establishment in Louisville of a permanent employment bureau were among the topics discussed. J. M. Manley, commissioner for the Industrial Association, of Cincinnati, was one of the principal speakers. Mr. Manley told the employers that they were 30 years behind their employes in properly organizing. Alfred Struck, vice-president of the organization, was another speaker, and also held the chair in the absence of C. F. Huhlein, the president, who was in California. S. Thruston Ballard, a member of the Federal Commission on Industrial Relations, outlined the work being done by that body, in its initial work, describing conditions met with and measures taken to overcome the obstacles. Mr. Struck was re-elected vice president and J. M. Vollmer secretary of the body.

The RETAILER

Eastern Pennsylvania Dealers Get Together

Builders' Supply Retailers of Keystone State Hold Banner Meeting at Philadelphia, in Which Spirit of Fellowship Predominates—Forty-two New Members Admitted.

Plans for completely protecting the dealers of Eastern Pennsylvania against unfair competition, providing a standard for dealers and contractors, and making provision for scrutinizing legislation that might prove inimical to the best interests of the trade were keynotes of the first get-together meeting of the Building Material Dealers' Association of Eastern Pennsylvania, held at the Hotel Walton, Philadelphia, on Tuesday, May 11. President George F. Erich said, after the last laughs of an excellent post-prandial vaudeville performance had passed into happy recollections of a busy and enjoyable day:

"I am more than pleased with the splendid enthusiasm and attendance at this meeting. I appreciate the evidence of loyalty and coöperation of the dealers. The support of the manufacturers, especially of the cement manufacturers, and the attendance, without consideration of the enthusiasm, insure positive success for the purposes for which the association was formed. Success will mean better business conditions for dealers all over Eastern Pennsylvania and, if 'in union there is strength,' we are already strong enough to make our voices heard with respect."

Secretary Charles H. Cox counted a membership present of 95 active and 18 associate members, which, considering the fact that the association is not yet two years old, he thought little short of marvelous. Forty-one new members were taken in at the meeting and there are a number of other individuals and firms whose applications were received, but upon which action was deferred until investigation can be made. The full membership indicating those present at the meeting as shown on roll call appears in another column. Some came in late and were not recorded.

Arriving delegates received more or less of a shock when they arrived at the Walton. There was a convention of the Grand Lodge of a National Jewish benevolent organization and the street, sidewalk and hotel corridors were full of gesticulating delegates. Hebrew newspapers strewed the lobby and for a second some of the delegates wondered what sort of an organization they had joined, anyway. But the good fellowship that made this dealers' meeting memorable soon led the delegates to another part of the hotel away from the "counter attraction," as the new fourth vice president, J. L. Tyson, called it.

The meeting was called to order on schedule at 11 o'clock with President George P. Erich in the chair, surrounded by his executive committee, J. Allison Gring, of Reading; H. J. Moyer, of Perkasie; J. C. Budding, of Lancaster; Treasurer Luther Keller, of Scranton, who wanted the next meeting held there; and Vice Presidents E. L. Merriman, of Scranton; J. N. Hendricks, of Pottstown, and J. L. Durnell, of Philadelphia. Secretary Charles H. Cox, who is also a member of the executive committee, was at his post and beaming all over with gratification over the tremendous success of the gathering.

Erick Pleads for Coöperation.

The purpose of the meeting was set forth in a short address of welcome by President Erich, who said:

"It is with a great deal of pleasure that I have the honor of welcoming you here to this, the first fellowship meeting our organization has had. The success of the association is more than assured by the big attendance, showing interest in the objects for which we have organized.

"We need your help and we need your five dollars, but we need your coöperation more. There is much work for us to do that will need unselfish and unstinted coördination. I went over Eastern Pennsylvania last week and called upon dealers everywhere, inviting them to come, and I was surprised at the very fine fellowship I found among the dealers in the small towns. That fellowship we hope to transplant into our organization and use it for the mutual benefit of Eastern Pennsylvania dealers as a whole, to the end that we may do away with unfair competition. One dealer said to me: 'What do we get out of it?' My answer to him and to you is: You get out of it just as much as you put in. I count upon you to put your effort into this association with all the enthusiasm you can muster and by so doing you will get out of it better conditions under which to do business."

J. L. DURNELL, WHOSE ENTHUSIASM HAS BEEN A BIG FACTOR IN THE SUCCESS OF THE EASTERN PENNSYLVANIA ASSOCIATION.

Some time before the meeting President Erich sent out to cement and gypsum manufacturers a circular letter asking coöperation to the end that all dealers to whom they sell cement in Eastern Pennsylvania might be induced to join the association.

Secretary Cox read the responses that came from those to whom the letter had been sent. Only one Portland cement company failed to actively help the movement, and it was explained in behalf of that company that at the present time it had no salesmen in the territory and therefore it could not distribute the application blanks. It favored the purposes of the meeting, however. Replies were read from the Bath, Atlas, Vulcanite, Pennsylvania, Allentown, Dexter Alpha, Coplay, Penn Allen, Tidewater, Lehigh and the Security Cement & Lime Co. A telegram from ROCK PRODUCTS AND BUILDING MATERIALS, wishing the meeting success, was also read.

One Hundred in Attendance.

By the time the preliminaries of the meeting were well under way the convention hall in the tenth floor of the hotel was more than half full with more than a hundred persons. Each delegate wore a very attractive button designed by J. B. McKenzie, of the Lehigh Portland Cement Co., consisting of a large keystone with a big letter "E" in the center on a blue background and bordered with gilt on a blue field bearing the name of the Eastern Pennsylvania association. It was about the size of a quarter dollar and was distinctive in that it was different from the ordinary cheap celluloid convention button.

President Erich made a call for new membership registration and half the attendance made a rush for the secretary's desk and for the next half-hour Treasurer Luther Keller had about all he could handle in keeping accounts straight and crediting members with their initial fee.

Circumstances Compel Durnell Resignation.

The resignation of J. L. Durnell, the Philadelphia manager of the Charles Warner Co., as fourth vice-president was read amid profound stillness. His letter explained that in view of the fact that his company had given up the local retail business he would not longer feel entitled to be represented in the membership. He regretted the necessity of the action, he said, and wished the organization all success. The resignation was accepted with profound regret that circumstances made it necessary for Mr. Durnell to retire. Jacob L. Tyson, manufacturer and dealer in wood burnt lime, building stone, hair, plaster, cement, sand and coal, of 900 Jefferson street, Philadelphia, was elected to succeed Mr. Durnell. Mr. Tyson is prominent in the affairs of Washington, is a member of the National Deep Water ways Commission and has held many posts of honor and distinction.

Forty-two Applications Accepted.

The night before the meeting was called, the executive committee met and talked over the candidates, forty in number, who had previously made application to be admitted to membership. The following were voted as active members:

Walter T. Bradley Co., Philadelphia.
Chester Lumber & Coal Co., Chester, Pa.
P. H. Fairlamb Co., Philadelphia.
Harry W. Gilbert, Philadelphia.
Joseph Gerbron Co., Cheltenham, Pa.
Estate of Rufus Hooper, Lansdowne, Pa.
M. Kelley's Sons, Philadelphia.
J. M. Long Hardware Co., Orwigsburg, Pa.
J. H. Leister & Son, North Wales, Pa.
Louis Miller, Pottsville, Pa.
W. S. McDowell, Chester, Pa.
A. R. Nicholson, Wyncote, Pa.
Robert Patterson & Son, Philadelphia.
Edward L. Taylor, Fernrock, Pa.
Frank C. Williamson, Media, Pa.
Jacob L. Tyson, Philadelphia.
George A. Sinn, Frankford, Pa.
Bowden & Northrup, Ashley, Pa.
M. A. Kuder, Allentown, Pa.
F. Hersh Hardware Co., Allentown, Pa.
Reitz & Snyder, Palmerton, Pa.
Fred W. Frantz, Kingston, Pa.
H. W. Ruggles, Luzerne, Pa.
George W. McAllarney, Wilkes-Barre.
D. H. Lesher & Son, Weissport, Pa.
E. J. Romig, Quakertown, Pa.

S. Y. Fredericks & Son, Hazelton, Pa.
Frank W. Miller, Bloomsbury.
C. B Hoyt, Wilkes-Barre, Pa.
J. W. Bishop, Sayre, Pa.
Petty Brothers, Lebanon, Pa.
Charles H. Dunkelberger, Kulpmont, Pa.
J. Walter Crowder Co., Philadelphia.
E. Y. Barnes, Yardley, Pa.
Knickerbocker Lime Co., Philadelphia.
Henry Palmer, Langborne.
J. C. Grove & Son, York, Pa.
Martin F. Connor, 6225 Woodland avenue, Philadelphia.

The following-named manufacturers were elected as associate members:

Philadelphia Slag Co., Penn Building, Philadelphia.
Merion Lime & Stone Co., Norristown, Pa.
National Fire Proofing Co., Philadelphia.

Local Associations Recommended.

President Erich, under the head of new business, made a number of recommendations. He urged the publication and free distribution of lists of members of the association to manufacturers and dealers everywhere in the district. He urged all the dealers in the association in small towns to get together, instead of practicing the gentle art of cutting each others throats. He urged coöperation and said that officers of the association were ready at all times to come to distressed localities where business conditions were not in conformity with the purposes of the association and seek to settle misunderstandings, the idea being to help in unifying the purposes of all associations and members in the state. The Eastern Pennsylvania and the New York association stand ready to coöperate for the general welfare of the dealers in the two districts.

The president also called attention to a bill now in the Pennsylvania House calling for owners' discretion, as to whether he shall employ cast iron or terra cotta sewer pipe in residence buildings. He asked for a discussion on this point.

Mr. Merriman said that as he understood the purposes of the association it was to help to safeguard the business of the dealers not by individual effort, but by coöperation. He spoke for better conditions and better fellowship and said:

"This association, when strong enough, can positively eliminate contractors as recipients of material at prices that dealers pay. All that is necessary is for us to stand together for the common good. Singly we are unavailing in our contentions. In unison we can command attention and results. I hope that now the start is made that we will not lose sight of the benefits we hope to derive and will stick and work close together."

The question was asked the chair as to whether department stores could be classed as dealers, reference being made to a general store in a small community where cement was sold in small quantities. President Erich said that the matter would come under the attention of the executive committee for a decision. He said, generally speaking, the department stores were not considered as dealers. He invited the dealers to notify him of cases where department stores enter into competition with legitimate dealers. Reference was made to the case of Sears-Roebuck & Co., of Chicago, who supply all materials for houses. Some department stores handle roofing paper and the names of such will be handed to the executive committee as occasion arises. In Philadelphia, it was said that two houses have dealt in building materials, but that in both cases the prices protected the dealer and did not underprice him. The matter, however, was left for later decision.

Reference to the workman's garnishee bill, now before the Pennsylvania legislature, and to the bill affecting the use of sewer pipe was also made. These and other legislative matters were left to a special committee, consisting of Messrs. Palmer, Keller and Tyson, which will look after all legislation affecting building material dealers. Communications may be sent to Joseph H. Palmer, Moylan, Pa.

Opinion seemed to be divided as to whether a terra cotta pipe was any less safe than a cast iron pipe. It seems that under the proposed amendment to the law the Pennsylvania owner may use terra cotta sewer pipe or cast iron, as he elects. In the absence of a true copy of the bill action as to whether the association endorsed it or not was left with the legislative committee.

The association voted to have the list of members printed as the president suggested.

Manufacturers Approved of Association.

Luther Keller, addressing the meeting, said:

The manufacturers in the main, I have found, are in strict accord with the purpose of the association. When we find 17 out of 22 represented at the meeting it seems to be a pretty sure sign that they approve of it.

We want, above all, protection against unfair competition. Most of the manufacturers are willing to give us five cents, but here and there breaks have occurred. These matters have been taken up and I do not think there is any likelihood of them occurring again in those particular cases. If we want the manufacturers to carry out their part of the bargain, however, we must be prepared to do the right thing ourselves. As dealers we have got to be absolutely fair with the manufacturers.

If we want 1,000 barrels of cement and know that we can get our money in 10 days and get seven cents, the temptation to split commissions in order to make a sale is great, but if we do that thing we cannot expect to make a success. I do not believe we should do it and, if we do, the manufacturer cannot be expected to fulfill his obligation to us.

In the case of bids I saw recently the figure was two and a half cents lower on one of three brands. Here was a case apparently of divided commission. Five cents is low enough, and when we dicker for a quick turn over at two and a half cents we are certainly courting trouble and establishing precedents that we can now eliminate by concerted action.

Straight from the Shoulder Talk.

The message that Joseph H. Palmer, of Moylan, Pa., brought to the meeting could well be called the keynote address of the day. It follows:

"I have been listening with a great deal of pleasure to the remarks of your president and to the words of your treasurer and I have been impressed with the sincerity of those who are trying to make this association a real power for good among the dealers of eastern Pennsylvania. But I want to impress upon you one thing; that this association can be no bigger, no better nor can it go any higher than the individual member's standard of honor. There is no law that will prevent a manufacturer from selling to whom he pleases, but there are ethics in business that govern all transactions and that is what makes it possible to do business at a permanent profit. It is the ethical side of business that prompts a manufacturer or wholesaler to meet you half way. It makes him afraid of the organized retail dealer, but only when the dealer himself lives up to his part of the contract.

"If you aspire to tell the manufacturer who he can sell to or who can buy from him, you as an individual member of the association can expect him to play fair and square with you only so long as you play fair and square with him. If you are not honest yourself you have no right to expect honesty in others. By all the laws of God and man both you and the manufacturer are entitled to derive a certain profit on the business you do, but if you are not fair to yourself or to the manufacturer you cannot expect the association to be any bigger or better than you are yourself.

"The lesson for this association may be learned from the experiences of the coal dealers' association when it was organized here in Philadelphia. That association grew until it had 1,200 members and it had a coal exchange here, but all of the work of those years went for nothing, all because the individual members failed to live up to the articles of their faith. It came to a pass that it was openly stated that nothing could be accomplished until they took George F. Baer in one hand and the public in the other and bumped their heads together good and hard before the dealer could hope to come in for a share of fair treatment. Why? Because some members sought an advantage over their competitors, violated the rules they set themselves to follow and left the association to its own destiny. The result immediately was that coal was sold by the carload to anyone who wanted it and the dealer was just as bad off as he originally was, if not more so, because he had lost the confidence of the operator. I would sooner trust George F. Baer, if he were alive, than some of the dealers in the association in the light of what I learned from experience through the conduct of some of the member dealers in that association.

"You cannot hope to build up your association on that kind of ground. You have got to figure the cost of doing business and be honest with yourself and with your association and with your manufacturers. You have got to hunt the almighty dollar on a straight profit basis plus honest practice. Instead, many of you are working for tonnage and are not getting the dollars.

"This association can be made to be one of your greatest blessings and I defy any man to contradict that statement. I went to New York to attend the conference there between the dealers and the manufacturers and I found that nine-tenths of the dealers were selling cement below par because they were looking for tonnage and not dollars. Can you build up your association along those lines? Do you want to? Look at the coal situation; anyone can buy coal in carload lots from the operators, and what has the dealer got to say about it?

"Jealousy and the fear that somebody is going to put one over on you must not tempt you to take the first step on violating your purpose to keep faith with the manufacturer. You cannot afford to operate in a narrow, petty jealous way. You have got to be big and just. As you are big and just so will your association grow. If you expect the manufacturer to keep up the differential on the barrel of cement to you, you have got to protect the other members of your association as well as yourself by playing fair. The greatest job you will have is to keep your members up to the by-laws. If you all work together to accomplish that you will make the Eastern Pennsylvania Building Material Dealers' Association one of the greatest blessings that has ever happened to the dealers in building material supplies." Applause.

What Constitutes a Member?

E. L. Merriman, of Scranton, briefly addressed the convention by asking what constitutes an eligible member of the association.

"It may be easy enough to say that no contractor may become a member of this association," he said, "but it is no easy matter to decide when a dealer is not also a contractor. In cities of the larger size, dealers are those who handle only building material and supplies, but in the small community the contractor may be the only person in the community who handles cement. Suppose some moderate consumer wants to buy some of his cement. Or suppose you reverse the situation. It is a nice problem to determine just how far to go. How are we going to construe who is a dealer and who is not, and who should be taken into this association as members? I believe a committee of three should be appointed by the president to pass on each case that comes up, same to confer with three representatives of manufacturers."

Lengthy discussion followed, in which Mr. Keller, Mr. Sinn, Mr. Budding and J. Watson Craft took part, the latter asking for information regarding a certain large consumer of cement who employs it in manufacturing purposes. Secretary Cox informed the delegate that the company in question bought cement at the same price that dealers would charge. A motion was carried and the president will make his announcements later.

Mr. Keller said that he thought the government does and probably always will be able to buy cement at the same price the dealers pay, but that there is a question as to whether railroads should receive the same concession. He said he knew of no reason why the railroads should be given the same figure that dealers get. He said he thought the manufacturers should get five cents more, thus making it optional with the railroads as to whether they patronized the dealers or manufacturers.

When it came down to the selection of the next place for the meeting Mr. Keller urged Scranton as the place, but the decision finally was made to have the next meeting in Philadelphia in February unless a special meeting was called in the meantime by the executive committee, and Messrs. Gring and Budding were appointed as a committee on arrangement. The February meeting will be the third annual, when officers will be elected.

Manufacturers Meet With Dealers.

At the end of the closed business meeting an invitation was extended to manufacturer's representatives to enter and the convention hall immediately filled so that every chair was occupied. The meeting was then thrown open to general conference and discussion.

Walter G. Dutton, sales manager of the Copley Cement Manufacturing Co., spoke of the necessity of protecting the dealer on his five-cents-a-barrel differential and brought up the question of price to a consumer and dealers, as the case might be of the man making cement blocks on the job. He also spoke of the distributor system in New England, which, he said, did not exist in Eastern Pennsylvania. He said that he believed that the legitimate dealer in a case like this should be protected.

Mr. Cope, of the Allentown Portland Cement Co., urged that the secretary send him more application blanks, and Mr. Trainer, of the Lehigh, spoke of the liability of abuses and discrimination against the dealer through legislation. He urged close scrutiny of legislation at all times. He called attention to the tendency of some hardware dealers to handle cement and thought some definition of such situations should be made. He said that if terra cotta pipe was to be optional in use by the owner as against cast iron pipe that the dealers ought to get together with the idea of increasing cement sales by inducing the use of concrete pipe or concrete casings for terra cotta pipe. He pointed out the advantage of thus developing small sales of cement.

E. P. Williams, of the Alpha Portland Cement Co,. spoke briefly upon the benefits of association work and pledged coöperation of the manufacturers looking toward favorable business conditions among dealers.

Mr. Maxwell, of the Atlas Portland Cement Co., said that he hoped to see the day when a differential of ten cents instead of five cents would be allowed the dealer, for the reason that the more money a dealer made selling cement the more cement was likely to be sold. He won considerable applause.

President Erich said he, too, hoped that the day of a ten cent profit on cement would be not far off.

The Afternoon Session.

The afternoon session was principally one of

(Continued on page 45.)

Del-Mar-Col Supply Dealers Show Enthusiasm

Reports and Discussions Indicate Necessity of Association and Benefits Possible from United Effort—President Grove Pleads for Increased Membership.

With an attendance of 35 active and 18 associate members, the third quarterly meeting of the Del-Mar-Col Building Material Dealers' Association was held at the Du Pont hotel, Wilmington, Del., May 19.

President Grove's report reviewed the work of the association during the past three months and exhorted members to greater action in an endeavor to increase the membership and thereby the usefulness of the association to the individuals and firms represented in the organization. The report of Secretary-Treasurer J. Grason Steffey showed an increase in membership and the healthy financial condition of the association. The work performed by the committee, headed by Charles Warner, which investigated the conditions of the retail market of Salisbury, Md., proved conclusively the need of the organization and the manner in which it can be of direct benefit to members, while the report of E. R. Pusey demonstrated the necessity of coöperation between the local organizations with the N. B. S. A. General discussion on the various subjects brought up indicated the enthusiasm of the members and the possibility of using an organization as a forum for the dissemination of ideas which are helpful to the membership at large.

Morning Session.

The meeting was called to order by President Grove at 11 a. m. and the roll call by Secretary J. Grason Steffy showed 35 active members and 18 associate members present. The minutes of the last quarterly meeting held in Washington February last were read and approved. Under reports of officers and committees, President Grove submitted the following report on conditions confronting the association, etc.

President's Quarterly Report.

Submitting this, my third quarterly, report as president of your association, I wish first to extend hearty thanks to those members of the association who have rendered me great assistance in the work of the organization, and the untiring zeal manifested in the work for the good of the building material dealers generally.

I am glad to say nearly, or I might say all, of our active members have shown a deep interest in the welfare and success of the association. I regret to state though there seems an apathy on the part of our membership to secure new members from the vast number of building material dealers not as yet affiliated with us, more noticeable in the small cities within our territory. It may be that those on the outside feel a reluctancy to join associations of our character, fearing the reward not worthy of the time and small expense attached thereto. I feel though, if the matter be presented in its true and proper light, only slight persuasive power would be necessary to bring all building material dealers within the association.

I, therefore, entreat our membership to do their utmost towards securing an increased membership. We all must know that with a complete representation of the building material dealers within our organization the easier it will be to accomplish the purposes for which the association was started.

From the manufacturers' standpoint, those eligible as associate members, their response to our call is more prompt and noticeable than those eligible to active membership.

Attendance at the past meetings has not been as large as we would like to have it, yet we appreciate the fact it is necessary to travel at times considerable distance for these meetings, yet we can but feel your presence will repay you well for the time and money spent.

I regret to state, owing to the proptracted illness of your president, he was not able to participate in a number of important meetings called in the interest of the building material dealers, and give the time and attention to association work that he would like to have given.

Your president, though sick, attended the National convention in Chicago as your representative on the board of directors, participating in two executive sessions, after which he was compelled to give up the work. Our vice-president, E. R. Pusey of Wilmington, Del., took up the work and most ably looked after the interest of our association at this convention.

At the final meeting in New York between the dealers in cement within the territory of the six Eastern associations and the manufacturers of cement, Mr. Pusey also represented you. It is not necessary for me to dwell on the purpose of this meeting as you are all familiar with the favorable conclusion reached at this gathering of dealers in and manufacturers of cement.

I wish here, in the name of our association, to thank Mr. Pusey for the gracious and pleasing manner in which he responded to each of my calls upon him, knowing, as I did, he at times sacrificed his time and individual interests for the good of the association.

At the present time the six Eastern associations, of which we are one, are working with the plaster manufacturers along the same lines as adopted with the cement manufacturers. Mr. Elwell, manager of the New York state association, is acting chairman for the Eastern associations. We are expecting an early call from him for a meeting with the plaster manufacturers and we hope before our next quarterly meeting to be able to report favorable results from this conference. It is the intention of the Eastern associations to take up, from time to time, with the several manufacturers of the different building supplies, the question of properly understanding the relationship between the manufacturer and dealer.

One more important question brought up at the Chicago convention I wish to present for your consideration, namely, the purpose of the National association to try to raise funds sufficiently large to organize the building material dealers in district associations throughout the United States along the lines of which our Eastern association and the other organized associations throughout the different sections of our country. This matter will be presented during the regular order of business.

PRESIDENT B. L. GROVE.

We also have for your consideration a communication from the Sash and Door Manufacturers' Association of Philadelphia and nearby sections, referring to the repeal of the Bankruptcy act, a uniform contract for universal use, also exchange of credit information.

The matters brought up at our Washington meeting relative to two manufacturers in lime having sold their product direct to the consumer, at a price prohibitory for the dealer to compete for the business, has been thoroughly investigated and the matter adjusted satisfactory to all parties concerned.

The proposed selling of cement through a broker in my home city was brought to the attention of our president, but we are happy to state the deal was not consummated; therefore, no official action was necessary. We merely mention this to show the worth of our association to the legitimate dealer, also the necessity of our members always being on the alert.

Your president is very ready and anxious to have communications from you. Whether it be in the nature of complaint or suggestion, the subject in hand will be given prompt consideration. We merely suggest this, realizing that at times some of our membership may feel a reluctancy in presenting a case, fearing it may not merit consideration, it being our duty to investigate every subject brought to our attention.

I know of no better way to bring this to a conclusion than by reading a poem by the Builders' Poet, published in the May 7th issue of ROCK PRODUCTS AND BUILDING MATERIALS, entitled, "Buck Up." (The poem was then read.)

President Grove made it a point to call attention to the fact that he had found a more prompt and enthusiastic response in the attendance of meetings from associate members than he did from active members and said he felt, therefore, that there was some work to be done to arouse a livelier interest among the dealers of the territory which is covered by the association. President Grove said he thought the poem, "Buck Up," told the present trade situation in pretty good shape and that it was good advice for all to follow. The reading of the poem brought out a round of applause.

A report from the secretary-treasurer showed a fair progress in the increase in membership and a healthy financial condition of the association. Next came a report from E. R. Pusey, the association's delegate to the sixteenth annual convention of the National Builders' Supply Association, held at Chicago, Feb. 8 and 9.

E. R. Pusey Reports N. B. S. A. Meeting.

As a delegate to the sixteenth annual convention of the National Builders' Supply Association, held in Chicago, February, 8 and 9, I desire to make the following brief report:

There were about 250 present, this number including both dealers and manufacturers. There was much enthusiasm shown from the beginning to the end of the convention. The first session was called to order by President Cormack about 10:00 a. m. Monday. The first thing on the program was the president's report which was very interesting throughout. One exceedingly interesting point in this report was in regard to costs. The president stated that most trouble caused in the retail business was the lack of knowledge of the retailers' cost of doing business. In practically every case of price cutting, the dealer did not keep an accurate account of his costs for doing business. Further, the manufacturers were getting to a point where they did not care to do business with the price cutter, or those that did not keep accurate cost accounts.

The association is striving to get in a position where they can permanently for the use of their members employ a competent cost auditor whose duty it will be to visit all members and install a cost system. Before closing the president mentioned the organization of our association and its affiliation with the N. B. S. A. Following the president's report Secretary Desmond stated that the membership was about 250 in good standing.

Monday afternoon was opened by an address by Amos P. Foster on "Anti-Trust Legislation and Its Effect on the Association Work." Mr. Foster during his address brought out many interesting points about the Sherman Anti-Trust law and the Clayton bill. In connection with Mr. Foster's address the president stated that business men should be interested in politics with the view of holding office and representing commercial lines. He also made a few remarks in regard to the need of the N. B. S. A. and local associations.

Practically all day Tuesday was devoted to speeches and reading of interesting and instructive papers on such subjects as cost, co-operation, etc., with the exception of a very interesting illustrated lecture of the use of gypsum plaster, also a very pleasing picture on the use of cement.

One very important matter discussed was the raising of money to run the association. There was quite an effort made to secure pledges for three years amounting to $30,000 per year, which the board seemed to think it would require to successfully run the N. B. S. A.

The banquet held in the evening and the wind up of the 1915 Convention was great. In my opinion the whole affair was a grand success.

Relation of Manufacturer to Dealer.

President Grove then referred to the effort being made by the association for a better understanding of business methods between the manufacturers of cement and cement dealers, which he had been empowered to look into for the association by its action at the meeting of February last. Mr. Grove assured the members that his efforts along this line were progressing very satisfactorily and he felt that improved conditions would result. Mr. Charles Warner gave his ideas that in all discussions with cement manufacturers for better business practices that such relations should be in the form of helpful suggestions wherein the dealer and the manufacturer derived a benefit, but that no deliberation or act should take place that would in any way lead to any transgression of the law. President Grove explained that in such discussions, which were of an individual nature, that only an effort for improved trade practices were in mind.

President Grove, in speaking on the subject of the work of the committee on credits, stated that owing to pressure of business and his illness that the proposed credit bureau of the association had not been given the attention it required to put it in shape for practical use by the association, but that he hoped to have this important feature of the association's work well under way by the next quarterly meeting.

A report on the Salisbury, Md., situation, involv-

ing an important trade principle in every-day business practice, was made by Charles Warner, chairman of the committee appointed to investigate this matter, who stated that he had made considerable inquiry and a personal trip to Salisbury for the purpose of enlightening himself thoroughly on the subject. It was believed by Mr. Warner that the work of his committee would be very helpful in satisfactorily adjusting such conditions in the future. Other members of the committee were John J. Kelley, Jr., W. G. Dutton and Frank Trayone. The report follows:

Conditions Affecting Market at Salisbury.

There are three active dealers at Salisbury whose principal business is that of retailing builders' supplies and other materials—names, A, B and C.

C has, in addition, a concrete block business.

D and E are principally engaged in making concrete blocks, forms, etc.

D carries two or three building materials in his warehouse which building materials are used in conjunction with his own manufacturing and concrete work.

E apparently carries only cement used for his manufacturing department.

A, B and C have been working together for a year or more and have been selling cement mainly on the basis of $1.50 paper, delivered around the town.

D was conferred with, but sufficient confidence was not developed among them to secure the strict adherence to the general price established by A, B and C.

E was also conferred with by A, B and C and was not regularly offering cement in the retail market, preferred not to sell it but occasionally when caught with an over-supply made some sales a little below the market. E was not considered, however, to be troublesome.

D, on the other hand, is claimed to be the concern which would not enter into closer and more definite relations with A, B and C.

It is reported that the cement representative selling D took an active part in pushing that particular brand of cement on one retail job particularly and that, as a result of this stimulation, a price of 11 cents a barrel under the recognized and understood scheduled price of A, B and C was quoted delivered on the job.

However, investigation on the part of the committee has shown that the claims are probably wrong in this particular case as, according to the bills, the cement was sold on the particular job in question at only one cent per barrel under the schedule price and the representative of the cement company did not take an active part in upsetting the retail market conditions so far as the committee has been able to determine in this particular instance.

The following steps should greatly help to straighten out such problems:

First, A, B and C should continue to patiently work with D particularly and also with E by social contact and friendly contact and friendly interchange of information on prices and other conditions in a frank fashion. The average man is human and honorable and after a time such treatment makes him ashamed of himself and he will tend to reciprocate.

Second, in cases of this kind, if a suspicion exists in the minds of A, B and C that a cement manufacturer's representative is pursuing a plan for introducing his brand of cement which is disturbing and disrupting to the local retail market conditions it is certainly then the duty of A, B and C to confer with such cement representative or his principal and acquaint him with the local conditions. By such a policy, progressive and coöperative dealers can in most cases overcome the injurious effects that may develop through the more or less natural desires of a cement salesman to increase his business, and if coöperation cannot be secured locally with such cement representatives, it is then the duty of the local dealers to proceed by presenting the facts and circumstances through the district association.

Third, if D is establishing himself as a regular dealer which is presumably the case in this instance, then he should be urged and encouraged to join the district association and come to the meetings so that he may become inspired with the importance of coöperation in cases of this kind. The manufacturer's representative in such cases should also be appealed to to use his influence with his customer to become interested in and subscribe to the principles of the district association.

Fourth, it is the further view of the committee that to assist the Salisbury dealers in working out their problem, the services of the Del-Mar-Col association should be offered to them to the extent of having the president of our association select two or three members from other points to meet the Salisbury dealers at some time convenient to the local dealers to hold a conference for the purpose of establishing friendly relations among the dealers. The successful efforts of our district association to help the Salisbury dealers on this line would be of great value to the dealers in other towns where the conditions may be unsatisfactory.

The working out of most of these suggestions is the natural duty of the local dealers in any community if they are in earnest and the constant and persistent working on such lines as proposed above will bring success in reasonable time in 99 cases out of 100.

After the reading of the Warner report on the condition at Salisbury, it was generally agreed by members that the outcome of this investigation would result in dealers having a clearer understanding among each other, particularly in the matter of handling contract business and retail business. President Grove, commenting on the report, stated that the Salisbury committe had done considerable good for the dealers of that community and that he wished it clearly understood that the work of the association is at all times for the welfare of local conditions which can only be accomplished with a coöperative spirit. Mr. Ward, a dealer of Salisbury, stated that the investigation made by the Warner committee will help the dealers of Salisbury, whom he believed are ready to cooperate for better conditions. Chairman Warner stated that these local problems require earnest individual attention to determine whether dealers are going to have confidence in each other and work together. If not, the effort for better conditions will fail. President Grove stated that the association was for the very purpose of correcting these conditions and thereby showing its worth.

President Grove next called the attention of the members to the effort being made by the National Builders' Supply Association to increase the number of local organizations and to secure funds through the voluntary contributions of members interested in the National association's general work. Mr. Grove, reading from a letter from E. H. Defebaugh, chairman of the finance committee of the National association, explained that it was the ambition of the association to raise the sum of $30,000. Discussion followed as to the help the various local organizations were to receive from the National body and President Grove stated that it was his understanding that it was the intention of the National association to employ a national organizer and to assist in every way possible the work of the several local organizations.

Territorial Arrangement of Retailers.

An interesting question was next raised by Walter C. Dutton, of the Coplay Cement Manufacturing Co., when he asked the meeting to determine whether or not a dealer was within his ethical rights when he sold cement outside the town in which he was located.

Mr. Dutton stated that on a concrete road job a certain dealer sold the cement to a contractor, the job being located in another town from that in which the dealer who made the sale operated. Mr. Dutton stated his company had established a price to the consumer and a price of five cents per barrel less to dealers, that the cement was sold to the dealer at his company's established price to dealers and the dealer sold the cement to the contractor at the price the manufacturer had established to the consumer.

This was a simple business transaction and one which eliminated any question of a distributer or any question of disturbing or conflicting with established dealer's prices within the town. It also eliminated any question of interfering in any way with the supply dealer's regular business where cement is warehoused and teamed to the job, as this was a road contract where the contractor received his cement on cars at the nearest station to his line of work and with his own labor took care of the deliveries.

It was just such a case where the Coplay company established a price of five cents above the dealer's price, so it, as a manufacturer, could sell on contracts of this character direct to contractors and still leave open protection to any dealer who could sell the contractor at the same price and have a profit of five cents a barrel in the transaction.

Mr. Dutton brought this situation to the attention of the meeting so that the dealers could themselves decide how they want the cement manufacturer to handle business of this character, and his reason for so doing it was because heretofore he had always considered the manufacturer's reason for establishing the five-cent differential in favor of the dealer was to permit the manufacturer or a dealer in another location to sell the contractor, in case the contractor preferred to buy for some special reason from him rather than through the local dealer; that his position as a manufacturer was objected to by the sales manager of another cement company on the ground that it was improper for a manufacturer to permit a dealer to sell cement on a contract of this size direct to a contractor outside of the town or immediate community in which he operates.

The question raised by Mr. Dutton was discussed at some length by members, including G. S. Brown, president of the Alpha Portland Cement Co., and Charles Warner. The outcome of the deliberation formed a concrete basis for further attention to this important trade condition by the association which could result in a satisfactory adjustment of it if the proper spirit of coöperation could be had between manufacturer and dealer.

An adjournment was taken here for luncheon, which was served in the meeting room.

Afternoon Session.

The meeting got down to business for its afternoon session about 1:30 p. m. Mr. Dutton inquired if the meeting was to reach any understanding leading to a decision of the question of price differential and territorial arrangement which he had brought up at the morning session. After the opinions of a number of members were expressed, it was agreed that the matter being of such vital importance to both dealer and manufacturer that it should be referred to the representative of the association, President Grove, for attention at the joint meeting of the presidents of the seven Eastern building material dealers' associations, to be held at New York City the following day. President Grove was requested to take the matter up at this conference, secure the views of the representatives of other associations and report back to the association at its next quarterly meeting in August.

H. W. Classen, Maryland Lime and Cement Co., of Baltimore, asked if the association had taken any steps to obtain a definite classification of building material dealers of the territory covered by the association. Mr. Classen felt that such a list or record would be very valuable to the manufacturer and a protection to the dealer in having the manufacturer know who were dealers and who were not. President Grove told the members that it was the purpose of the association to compile such a record of all recognized dealers of the section covered by the association's work, and that these lists would be furnished the manufacturers of builders' supplies. Such a record would also be of great value in the future work of increasing the association membership, and with such information at hand, it would be possible to conduct a more systematic campaign for new members.

Elwell Emphasizes Benefits of Associations.

The chair then called upon G. D. Elwell, of Albany, N. Y., manager of the New York State Builders' Supply Association, who had very kindly come from Albany to give the members an outline of what had been accomplished by the New York association in its various endeavors for better trade conditions. Mr. Elwell said that only with the sincere and earnest coöperation of all the members could any association succeed; that this meant hard work and constant application to the several lines of work to be conducted. Mr. Elwell pointed out numerous practical benefits which had been derived through the proper organized effort of the Eastern building material dealers associations, and one in particular being the cement problem, which had been greatly improved through the attention given it by the several Eastern associations. He stated that the dealers' interests were the manufacturers' interests, and that at the present time fully 85 per cent of the product of cement was being distributed by dealers and that the five per cent differential was now well in force, all of which had been accomplished by individual effort of the heads of the different Eastern associations. Mr. Elwell said, "I want to impress upon you one thing, the dealers have the situation in their hands and through them will result whether their business welfare will improve. Get together and work right with the producers and you will find conditions will get better."

Mr. Elwell laid much emphasis upon the necessity of working harmoniously with the other Eastern associations by meeting one with another to coöperate for the improvement of the state laws

governing the general conduct of business. "The manufacturer has got to have the dealer," said Mr. Elwell, "but if you dealers don't play right with the manufacturer, you will find he will get back at you." But with the true spirit of legitimate coöperation through the progressive work of the various associations, Mr. Elwell pointed out that greatly improved conditions in the trade would result. The address of Mr. Elwell had the Billy Sunday spirit in it and created much enthusiasm among the members.

J. L. Durnell, Philadelphia representative of the Charles Warner Co., addressed the meeting showing the splendid progress that had been made by the Eastern Pennsylvania Building Material Dealers' Association in the increase of its membership. Mr. Durnell stated that this good work had only been accomplished by hard work and individual effort, with a general policy among the dealers that they wanted to treat the manufacturer fair and, therefore, solicited his coöperation. Mr. Durnell stated that at the last meeting of the Pennsylvania association there were 94 active members present and 17 associate, and with the campaign for membership now being conducted they looked for 150 active members at the next meeting. Mr. Durnell also referred to the Philadelphia Retail Builders' Supply Dealers' Association, which was the strongest organization of its kind in the country. He stated that this association was receiving the fairest treatment possible from the cement people, the result of a proper spirit of coöperation.

A resolution was next adopted expressing the thanks and appreciation of the association to the Charles Warner Co. and the City Club of Wilmington for the courtesies extended the members during their stay in the city.

The question of the place of holding the next quarterly meeting came up and a plan was suggested that an effort be made to hold a combined meeting of all the Eastern associations and that President Grove be requested to discuss this plan of a gathering at the conference of Eastern association presidents, to be held at New York City, and later bring it before the executive committee.

The meeting then adjourned.

Active Members Present.

John J. Kelly, Natl. Bldg. Supply Co., Baltimore.
John S. Bullock, John S. Bullock Lime & Cement Co., Baltimore.
Henry W. Classen, Md. Lime & Cement Co., Baltimore.
W. B. Joyce, M. J. Grove Lime Co., Baltimore.
J. G. Steffey, Steffey & Findlay Co., Inc., Hagerstown.
Oscar L. Johnson, Oscar L. Johnson Co., Rockville.
Warren W. Price, Smyrna, Del.
L. M. Hearn, L. M. Hearn Co., Milford, Del.
Charles G. Waples, Charles G. Waples Co., Milton, Del.
Richard Catlett, J. G. Justis Co., Newport, Del.
B. L. Grove, Grove Lime & Coal Co., Washington, D. C.
C. T. Kingsberry, Rosslyn Supply Co., Washington, D. C.
H. R. Eastwood, Southern Fireproofing Co., Washington, D. C.
W. P. Ward, Farmers' & Planters' Co., Salisbury, Md.
H. E. Mitchell, G. E. Mitchell & Co., Salisbury, Md.
W. F. Bounds, National Concrete Vault Co., Salisbury, Md.
Jos. E. Benjamin, C. A. Benjamin & Co., North East, Md.
A. C. Gamble, E. R. Pusey Co., Wilmington, Del.
E. R. Pusey, E. R. Pusey Co., Wilmington, Del.
Charles Warner, Charles Warner Co., Wilmington, Del.
P. J. Rutan, Charles Warner Co., Wilmington, Del.
W. A. Smith, Charles Warner Co., Wilmington, Del.
J. R. Baxter, Charles Warner Co., Wilmington, Del.
Charles C. Bye, Charles Warner Co., Wilmington, Del.
George F. Cornell, Charles Warner Co., Wilmington, Del.
Fred A. Daball, Charles Warner Co., Philadelphia, Pa.
J. L. Durnell, Charles Warner Co., Philadelphia, Pa.
J. B. Emack, Charles Warner Co., Phoenixville, Pa.
John C. Denison, National Mortar & Supply Co., Pittsburgh, Pa.
William Smalley, Smalley Campbell Co., Wilmington, Del.
Henry M. Camp, ROCK PRODUCTS AND BUILDING MATERIALS, Washington, D. C., and Chicago.

Associate Members Present.

H. K. Hobart, Niagara Gypsum Co., Buffalo, N. Y.
J. K. Wetler, Atlas Portland Cement Co.
J. R. Maxwell, Atlas Portland Cement Co.
Charles L. Johnson, Atlas Portland Cement Co.
S. W. Ketchel, Atlas Portland Cement Co.
G. S. Brown, Alpha Portland Cement Co.
E. P. Williams, Alpha Portland Cement Co.
Joseph B. Kent, Alpha Portland Cement Co.
George N. Dawes, Alpha Portland Cement Co.
H. S. Rayner, Security Cement & Lime Co., Baltimore, Md.
Charles L. MacNeal, J. B. MacNeal & Co., Baltimore, Md.
Jos. J. Sumervill, Coplay Cement Co.
Walter G. Dutton, Coplay Cement Co.
C. L. Wooden, Coplay Cement Co.
Frank M. Traynor, Lehigh Portland Cement Co.
H. A. Meech, U. S. Gypsum Co.
W. R. Fox, Dexter Portland Cement Co.
C. B. Frye, Keystone Plaster Co.
Douglas Darling, Keystone Plaster Co.

Visitors Present.

John W. Watkins.
G. F. Erich, Allentown, Pa.
G. D. Elwell, manager of the New York State Builders' Supply Association, Albany, N. Y.

Coal Chutes and Their Practicability

BY JOHN R. COLLETTE.

This is the first of a series of articles on coal chutes. These articles will endeavor to prove the value of coal chutes and the fact that building material dealers are the logical men to handle them. What is true of coal chutes is likewise true of other specialties. The chute is emphasized merely as an example. The benefits accruing to retailers from a line of specialties will be pointed out in subsequent issues.

Perhaps the best argument that can be given in favor of built-in coal chutes is the fact that five years ago they were practically unknown, while today there are several hundred thousand in use. This rapid growth has come, not because of any special effort made by coal chute manufacturers, but from the long felt need of giving protection to the coal room window. As far back as the days of our grandfathers this need was felt, evidenced by the fact that all sorts of makeshifts were used to prevent damage being done to building through the delivery of coal. So with this actual demand already established, it is only necessary to produce a coal chute that will efficiently serve its use at a moderate cost, to insure its practicability. However, let us determine, if possible, the attitude of the building owner toward a built-in coal chute.

THE OLD WAY—THE BROKEN WINDOW.

From the standpoint of a building owner it is true that a coal chute is a very small item in the construction of a building; but the pride of every man is touched when it comes to the appearance of his property, and a coal room window that has become broken and marred with the surrounding wall blackened with coal dust is certainly very undesirable. Furthermore, when a building is offered for sale a coal chute installation will tend to increase where an unprotected coal-room window in need of repair will decrease its value. There is absolutely no way of preventing the coal-room window from becoming an "eye-sore" without giving it adequate protection, for the coal men have long been appealed to without results.

The cost of a built-in coal chute is a point that would at first appear to be a hazard to their practicability, but because of the many different types, and their costs, ranging from five to twenty dollars, now being put on the market, there is a coal chute to fit the pocketbook of the most economical builder. Again, the list price of a coal chute is by no means the true cost, for where a built-in chute is installed, the window frame, sash and glass is not necessary, which means an initial saving of from three to five dollars on the coal chute investment.

Furthermore, there is an actual saving in a coal chute installation during the entire life of the chute (which in the majority of cases is longer than the life of the building) inasmuch as the building owner is not continually put to expense in keeping his coal-room window in repair. This is a very important item when it is remembered that every time coal is put into a coal bin enough damage can be done by a careless coal man to necessitate repairs being made. With the present high cost of labor and material it takes but a very few repair bills to more than equal the cost of a coal chute.

COAL CHUTES PROTECT THE WALL.

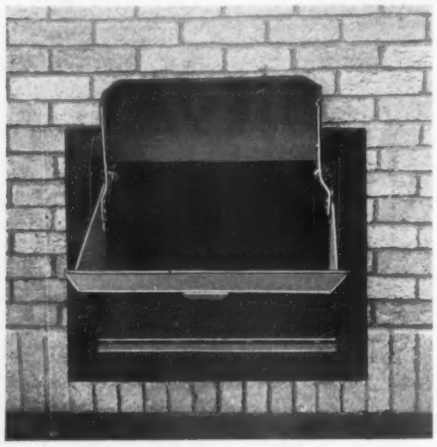
To the home owner built-in coal chutes represent more than a saving in repair bills because of the many conveniences that they offer. They take all of the disagreeable features out of taking in coal; to anyone who has ever crawled through a dirty coal bin to unlock the coal-room window this is very attractive. Coal chutes have made this easy, for all of the standard chutes can be unlocked from the inside without going into the coal bin, and are locked by closing the hopper from the outside of the building. They are burglar and fireproof and, when used, the coal can be put into the bin without scattering it all over the ground, leaving stray lumps of coal lying around to be picked up after the coal man has left.

At the present time fully 60 per cent of the architects are specifying built-in coal chutes in drawing up plans of their buildings, for they have

THE NEW WAY—THE PROTECTED WALL.

been quick to recognize their advantages and efficiency in protecting the coal-room window. The contractors have also recognized the value of coal chutes and are recommending them at every opportunity.

Coal chutes as a product are fast coming to the front and are being classed with the large number of the newer building specialties which go to make



CHUTE READY FOR THE COAL.

up the more modern buildings, and the time is close at hand when they will go into every building erected, thus becoming a staple building material.

Cincinnati Market Quiet.

Cincinnati, Ohio, May 19.—With the whole building situation in this vicinity a little duller than the optimists in the material trade felt they had a right to expect, the way the big courthouse job is dragging along serves as a sort of capsheaf to the whole thing. The purchase of much of the material will of course be delayed correspondingly because of the suit in connection with the letting of the contract. In other respects the season has proved to be draggy, as the trade puts it. The work handled continues to be relatively small, both in the size of the individual jobs let and in the total volume handled. However, they take some comfort in the fact that the architects seem to have plenty to do, and that prospects, as evidenced by the very excellent medium of building permits, are first-class.

F. H. Kinney, manager of the Hyde Park Supply Co., one of the busiest general building supply concerns in the city, reports that things have been moving along somewhat slowly, with only a fair business. Mr. Kinney divides his time largely between the company's quarters in Hyde Park, for the building of which handsome suburb it sold most of the material, and his downtown office, finding plenty to do between the two.

L. H. McCammon Bros., according to Walter McCammon, who has charge of the firm's spacious offices in the Johnston building, are handling a fair business, but, like the rest of the trade, little more than this. Mr. McCammon is optimistic as to the balance of the season, pointing out that things are naturally slow in opening up after a period of financial doubt and unrest, and that, especially in view of last summer's idleness, there is every reason to believe things this summer will be extremely active.

A number of small jobs comprise the demand for materials with the Cincinnati Clay Products & Supply Co., Secretary Robert Harkins noting the general absence of anything that could be called really big on the present market. There is enough of the fair-sized residence run of work to keep the company moving along, however, and when things get started in earnest the season's volume of business will approach a high average.

Pittsburgh Trade Dormant.

Pittsburgh, Pa., May 19.—Retailers are getting fairly busy although there is no rush in sight. In building operations they are hampered badly by the lack of requisitions. There were many projects put on the boards early in the spring which have not got up to the contract stage.

The National Mortar & Supply Co. reports that the trade in agricultural lime is badly off this spring. For some reason farmers who bought larger quantities of lime last fall than ever before have dropped out of the market this spring and sales are accordingly slow. The plant of the company in Ohio is running at fair speed but none of the Ohio plants is rushed at present.

MARTIN VAN STRAATEN IS LUSITANIA VICTIM.

On the list of those lost in the sinking of the ill-fated Cunard steamship Lusitania appears the name of Martin van Straaten, of London, England, who for three months had been investigating building material conditions in this country and from whose concern we published a letter directed to us containing an interesting statement regarding the general conditions of the building material trade in England.

Mr. van Straaten was the founder of the firm of Martin van Straaten & Co., building material dealers, London. Martin van Straaten, a Hollander of origin, was a naturalized Englishman. He was very popular in the English building material trade, a capable business man, loyal and honorable. His happy and bright disposition won him many friends in and out of the trade. Besides, Mr. van Straaten enjoyed an international reputation as being a connoisseur of old art. He resided in a beautiful home in West End, London.

IOWA DEALERS FORMING AD SQUAD.

Unusual interest is being taken by building material manufacturers and retailers in the Associated Advertising Clubs convention to be held in Chicago June 20 to 24. Iowa business men are organizing a regiment and expect to visit the Windy city with a force of 1,000 men. Not only are the men planning to attend the convention en masse, but when they reach Chicago they will show the results of weeks of military training and will possibly present to the advertising men of the world the best drilled contingent in attendance at the convention. Mr. LeQuatte, of "Sucessful Farming," is colonel of the regiment.

George A. Jewett, the progressive building material dealer of Des Moines, Ia., is captain of the squad composed of building material dealers. Mr. Jewett is a firm believer in advertising, as shown by the ads appearing in the daily newspapers of Des Moines at the present time. This is Mr. Jewett's fiftieth year in Des Moines, and he is celebrating the golden anniversary by telling the citizens of his town that he was well received 50 years ago and the same spirit of welcome still permeates Des Moines atmosphere, especially in the neighborhood of the Jewett Lumber Co.'s office.

In speaking of the value of the coming advertising convention, Mr. Jewett says: "This is really a school in advertising, and dealers will learn 'how' to advertise their goods. I wish that readers of ROCK PRODUCTS AND BUILDING MATERIALS in the state of Iowa who plan to go would inform me, as we aim to have the squad of building material men from the Hawkeye state as complete as possible."

NEW BEDFORD SETS RECORD.

New Bedford, Mass., May 19.—New building petitions in New Bedford for its biggest week in April called for a total of $150,000 construction. Of this amount, $110,000 is for dwellings. This was a new record for a single week for one of the smaller, but growing cities of New England.

Louisville Retailers.

Louisville, Ky., May 17.—Louisville dealers in building material generally report that they are receiving numerous small orders, but that very few large orders are being placed and that business as a rule is not quite up to that of last season.

E. P. Teague, secretary-treasurer of the Union Cement & Lime Co., has had a specially constructed bulletin board made to be hung in front of the company's Main street office every day. This board is so arranged that sliding letters can be placed upon it and the wording is changed daily. The board recently notified the public that the company's new brick display room had been completed and invited everyone to come in and see it. "A good tip, a safe bet."

Warren Brothers, dealers in contractors' and builders' equipment and materials, report a large volume of orders, but that the orders are considerably smaller than usual. Equipment is moving slowly and collections are off just now. The fact that more accounts are being placed on the books is taken as a sign that more business will be handled when things improve.

Boston Building Shows Improvement.

Boston, Mass., May 19.—Building permits which have been issued by the city of Boston the first four months of this year total 712 and show a marked increase in number and represent a larger amount of capital, as compared with building operations for the first four months of last year. Building Commissioner Patrick O'Hearn, explains that the total number of permits granted for first and second-class buildings during April was 94, and third-class buildings, 167; total, 261. This record for April has been exceeded but once since the department was organized; permits for third-class buildings have been exceeded twelve times.

With an arbitration plan under way, the building trades situation is believed to be past a crisis, although the carpenters' union has not given over entirely consideration of shorter hours and higher wages. The bricklayers' union voted not to press their demands for a five-day working week at this time.

SOUTH CAROLINA DEALERS ORGANIZE.

With headquarters in the city of Columbia, retailers of South Carolina have organized what is known as the Builders' Supply Association of South Carolina. The organization has been commissioned with a capital of $1,000. The organizers are G. A. Guignard, J. C. Otis and E. N. Joyner, Jr.

The object of the association is set forth in the declaration that it has been organized "for the promotion of friendly intercourse and pleasant business relationship between those engaged in the business of supplying building materials and doing such contracting in the state of South Carolina; the investigation and adoption of measures tending to advance the interests and better the condition of those engaged in said business and occupation and the gathering of information and the improving of existing methods for the diffusion of such information relating to said business."

RECENT INCORPORATIONS.

The Sneyd Enameled Brick Co., Trenton, N. J.; recently received a charter authorizing manufacture and deal in brick and all building materials; capital stock, $100,000; incorporators, Charles Thomas H. Phillips, 3145 Gordan street, Philadelphia; Clement H. Phillips, same address, and Robert J. Miller, 2312 Natrona street, Philadelphia.

The Lamkin-Allen Co., of Milan, Mich., capital $30,000; manufacture and deal in builders' supplies.

NEWS of the TRADE

Slight Building Decrease in April.

While there was a slight decrease in building operations in the leading cities of the United States for April, the showing is very satisfactory in comparison with the corresponding month a year ago, when the entire situation is taken into consideration. According to the statistical department of Construction News, permits were taken out in April in 100 cities for the construction of 27,408 buildings, involving a total estimated cost of $70,256,120, as against 27,790 buildings, aggregating in cost $74,712,981 for the same month a year ago, a decrease of 382 buildings and $4,456,861, or six per cent. Of the total number there were increases in 39 and decreases in 60 cities. The figures in detail are as follows:

Cities.	1915 No. of Bldgs.	1915 Estimated Cost.	1914 No. of Bldgs.	1914 Estimated Cost.	% Gain.	% Loss.
New York (Boros of Man. and Bronx)	833	$ 9,977,610	983	$ 7,385,205	35	..
Chicago	754	6,820,700	1,099	9,465,400	..	28
Brooklyn	1,479	5,284,656	1,265	5,230,120	1	..
Boston	553	5,357,000	548	5,471,000	..	4
Detroit	958	4,268,460	1,079	3,013,735	42	..
Cleveland	1,897	3,076,385	1,568	2,594,115	19	..
Minneapolis	949	1,951,035	890	1,912,290	2	..
San Francisco	553	1,646,874	553	1,707,064	..	4
Los Angeles	721	1,591,399	1,013	1,898,304	..	16
Bridgeport	107	1,493,413	105	210,905	608	..
Cincinnati	1,658	1,317,485	1,506	964,423	37	..
Buffalo	543	1,199,000	493	1,350,000	..	7
Milwaukee	600	1,173,668	584	1,342,502	..	13
Rochester	429	1,159,357	453	1,156,109	..	..
Kansas City, Mo.	488	1,125,170	354	736,665	53	..
Washington, D. C.	505	1,029,020	486	851,300	21	..
St. Louis	981	986,719	1,090	1,734,412	..	43
Pittsburgh	453	974,283	390	1,158,225	..	16
Toledo	392	959,042	338	772,144	24	..
Seattle	822	887,105	936	1,227,930	..	28
St. Paul	339	829,914	369	1,204,769	..	31
Indianapolis	701	776,511	764	1,037,466	..	25
Hartford	153	582,602	112	453,843	28	..
Portland, Ore.	477	559,415	605	769,500	..	27
Newark	250	549,846	234	754,142	..	27
Worcester	207	542,860	196	485,174	12	..
Oakland	294	530,302	300	405,540	31	..
Dallas	111	492,175	198	565,335	..	13
New Haven	166	465,220	118	349,455	66	..
Atlanta	240	446,337	335	565,879	..	21
Memphis	222	438,355	288	420,085	4	..
New Bedford	144	434,520	141	392,150	11	..
Columbus	310	406,555	275	683,553	..	40
Omaha	157	389,420	154	593,035	..	34
Baltimore	248	388,313	412	635,215	..	39
Akron	260	381,035	319	659,030	..	42
East St. Louis, Ill.	55	373,280	57	78,745	380	..
Richmond	148	370,114	142	567,131	..	34
Springfield, Mass.	167	365,475	169	450,460	..	19
Duluth	234	340,178	310	440,491	..	23
New Orleans	....	339,571	....	218,350	55	..
Denver	289	326,590	454	595,405	45	..
Peoria	60	317,305	54	179,650	77	..
Grand Rapids	281	298,394	175	133,134	126	..
Albany	388	285,745	450	1,156,595	..	75
Louisville	256	282,400	233	447,870	..	38
Salt Lake City	150	259,852	119	331,200	..	21
Des Moines	78	225,223	84	161,178	34	..
Youngstown	154	219,505	166	470,035	..	53
Trenton	156	219,000	145	232,602	6	..
Canton	97	217,520	58	107,100	103	..
Erie, Pa.	204	213,918	252	399,183	..	46
Dayton	119	210,260	142	421,300	..	50
Sioux City	78	201,670	118	317,527	..	36
Lincoln, Neb.	88	195,999	71	172,540	14	..
Binghamton	214	180,225	236	567,029	..	68
Portland, Me.	67	177,734	40	85,000	109	..
Birmingham	100	169,701	244	318,146	..	47
Norfolk, Va.	56	162,218	95	313,630	..	48
Quincy, Mass.	110	154,725	84	153,511	1	..
Kansas City, Kans.	99	147,500	88	113,995	29	..
Allentown	....	146,295	....	466,270	..	69
Elizabeth	46	141,575	58	193,774	..	27
Savannah	56	139,585	47	58,880	137	..
San Antonio	147	131,955	236	324,766	..	59
St. Joseph, Mo.	106	130,220	67	74,320	74	..
Berkeley	91	129,000	118	305,950	..	57
Spokane	119	126,875	98	214,610	..	41
Paterson	131	124,426	118	293,458	..	57
Wilmington	....	124,020	....	286,054	..	57
Wilkes-Barre	315	119,746	83	86,195	39	..
Scranton	100	118,952	84	157,382	..	24
Springfield, Ill.	45	115,115	56	79,015	46	..
Haverhill	56	114,200	98	166,350	..	31
Reading	55	111,875	63	87,200	28	..
Topeka	71	108,875	44	69,875	56	..
Altoona	174	108,570	118	130,107	..	16
Davenport	64	108,022	116	256,998	..	58
Tampa	139	106,665	163	125,280	..	15
South Bend	69	102,129	80	158,105	..	35
San Jose	40	102,077	54	83,094	24	..
Schenectady	100	101,748	196	206,953	..	51
Lawrence	45	98,235	39	190,060	..	48
Pasadena	122	96,923	145	158,455	..	38
Superior	133	95,455	70	67,514	41	..
San Diego	122	95,250	202	240,805	..	60
Fort Worth	53	81,495	73	214,050	..	62
Passaic	29	81,099	85	279,982	..	66
Brockton	69	80,803	69	71,797	13	..
Nashville	367	76,078	101	258,505	..	73
Saginaw	54	69,816	64	93,585	..	25
Woonsocket	46	69,060	25	40,540	70	..
Troy	84	60,745	59	37,333	63	..
Sacramento	94	58,591	114	207,345	..	72
Tacoma	107	47,888	147	165,303	..	84
Chattanooga	162	44,395	397	219,490	..	80
Stockton	51	38,503	42	58,742	..	34
Auburn	....	35,595	....	26,208	35	..
Holyoke	25	21,845	21	554,127	..	96
Colorado Springs	31	12,045	24	60,000	..	80
	27,408	$70,256,120	27,790	$74,712,981	..	6

"Spotted" describes the condition throughout the country most accurately. New York and New England, as well as the Central lake states, reflecting the greatest activity, and even in these sections there were some heavy losses. There were heavy losses in the Pacific coast cities with the exception of two or three small places. A gratifying feature is an increase of 35 per cent in New York City, indicating most satisfactory improvement in comparison with the recent past. The effect of labor troubles in Chicago is clearly discernable in a decrease of 28 per cent—almost remarkable when taken in comparison with former conditions, building having been continuously active in the latter city notwithstanding the situation abroad.

Chicago Building Trades Still Idle.

The biggest factor in the strike situation now confronting Chicago is the dispute between the carpenters' union and the contractors' organization. During the past week union officials agreed to submit to a vote the proposition offered by the contractors in the shape of a three-year contract with an increase of two and one-half cents per hour after the first 18 months. The vote of the local unions is now being taken but indications, based on the results of such unions as have already expressed themselves, predict that conditions will not be changed for at least a week.

Members of the carpenters' union state that there are a few provisions of the contract offered them to which they object. This accounts for the negative vote of the carpenters.

With the object in view of securing peace and for the purpose of returning to work at the earliest opportunity, contractors are seriously considering the advisability of substituting the uniform agreement, which has been approved in principle by both the Building Construction Employers' Association and the Building Trades Council, in lieu of the contract with the objectionable features. It is believed that the carpenters will readily accede to the terms of the uniform agreement and as a result construction work in the city of Chicago should proceed with all speed.

Everybody in Chicago—2,500,000 persons—is effected directly or indirectly by the strike. Millions of money are tied up in partly completed building operations. With 130,000 men on strike or locked out, with a loss in wages of at least $500,000 a day and with thousands of innocent people all over the city feeling the financial strain, the situation is fast becoming intolerable from the standpoint of the general public.

MEMPHIS CITY CONTRACTS LET.

Memphis, Tenn., May 19.—The engineering department, through the board of city commissioners, has let contracts for 1915 supplies. The successful bidders were: vitrified pipe, Tri-State Builders Supply Co.; concrete walks, steps and retaining walls, Koehler Bros. and Fowler Construction Co.; macadam, Greenville Stone & Gravel Co.; concrete curbs and gutters, M. E. Larkin; Mississippi sand and gravel, Union Sand & Material Co.; cement and gravel, J. L. Lumpkin; miscellaneous castings, Chickasaw Iron Works; general hauling, John J. Hally; Koehler Bros. and Fowler Construction Co. were awarded the contract for the building of reservoir No. 1, between Main and Front streets on the bayou.

Material circles in Memphis are taking on new life. Farming activity and rehabilitation of many business and residence localities promise much for later in the season.

Canadian Activities.

Toronto, Canada, May 15.—There is a persistent rumor that Canada Cement common is a particularly good speculative purchase at the present, namely, 28. This rumor is based on the fact that the stock has not moved since trading was resumed. The big order for 2,500,000 barrels may in part account for the bullish rumors that have been current for some weeks. A very good authority states that the company will earn fixed charges and preferred dividend this year along with a surplus on common. What the surplus will be is a mere matter of speculation, but the same authority makes the guess that it will be between one and two per cent.

New builders exchanges have been opened at Sarnia and Guelph, Ont. The one at Galt has been reorganized.

A hydrated lime plant of large capacity is to be erected near Renfrew, Ont.

Building permits for April for 26 Eastern Canada cities amount to $2,789,390. For the first four months of this year the permits of 26 cities amount to $5,796,737. This is a large decrease over the same period in 1914.

Thos. A. Beament and Alan H. Haskett, both of Ottawa, have incorporated the White Marble Co., Ltd., Ottawa, with a capital stock of $150,000, to quarry marble and manufacture cement.

N. Y. Courthouse Plans Filed.

New York, May 19.—The filing last week of the plans for the New York county court house, to cost $10,000,000, gave building material interests supplying Manhattan more hope for better business. In other parts of New York City there has been a decided impetus to building construction, but in Manhattan construction work and building material requirements have been decidedly slack. It is estimated that about 35,000 barrels of cement will be used in this operation and that between 6,000,000 to 10,000,000 common brick will be used, depending upon the revised plans just filed.

At this writing there is absolutely no change in the premium rate or interest rate for permanent building loans and individuals or institutions are no freer or no more hesitant about making engagements than they were before the latest crisis developed. It is merely a question of waiting until the stocks that are now being dealt in heavily have a chance to operate in favor of savings bank surpluses and thus make money freer, before construction money becomes absolutely easy again.

K. C. DEALERS LOOK FOR IMPROVEMENT.

Kansas City, Mo., May 19.—Buildings are practically all busy. There is little big stuff, but apartment house and dwelling work has opened up strong. In the aggregate this makes a good volume of work and there are few complaints. The deficiency, of course, falls most heavily on the material men and on labor, but the public work, especially if the bonds are voted, will help to care for the latter feature. It is estimated that about 80 per cent of the proceeds of the bonds—nearly $5,000,000—will go for labor. In this case the response of owners who listened to the advice to "build now" will be seen to have been wise. Materials, however, have not changed in prices and seem likely to remain fairly steady.

N. B. S. A.

Team Work in Association Activities.

How to enlist the support of those who rightfully should be amongst the workers in all association activity seems to be a difficult problem to solve, and the reason for this lack of interest, for it can be called nothing else, is not apparent to the men already in the field who have put their shoulders to the wheel and who are using every effort to cultivate, as it were, the soil of prosperity and a consequent satisfied working condition.

There can be no contradiction of the fact that every great success we have or may acquire in this world is the result of coöperation with our fellow being; in fact, it is one of the fundamental principles of our existence, and it is to intensify this coöperation and improve upon it that we find associations of all kinds springing up in our midst every day.

A good many of the principles advocated by these bodies are considered in the minds of some people as being theoretical, emotional or visionary, and this opinion was even more prevalent a few years ago; but the greater portion of the thinking people of today have come to look upon these appeals as being well worth the time and thought of each individual—and after all, do we not find that, as a rule, something more than mere theory does exist in these appeals? Theory does not get you very far in these days, and without it being backed up by something practical it soon goes the way designed for just such efforts. What, then, are the practical benefits which result to the individual from aligning himself with these coöperative forces? They may be summarized as follows:

1. Benefits from discussing with men in the same line of work problems peculiar to that line.
2. Close association and better acquaintance removes bitterness between individuals.
3. Inspiration for personal problems results from knowledge of the load the other fellow carries.
4. Problems of general interest require united efforts for right solution.
5. Active participation in work with others results in education to the individual.
6. The higher type of citizenship requires that each person give definite effort along lines where results are not purely selfish, hence the individual becomes a better citizen.

The man who is already an active association member too often is satisfied to sit back and feel inclined to allow his competitor to go struggling along without the same beneficent influences that he is enjoying, not realizing that the permanency of his organization and the best guarantee of its long and prosperous existence lies in a united support by the trade it fosters. Further, the association looks to its members as being the means of upbuilding its structure. They are, or should be at least, the walking delegates in a continuous campaign for an increased membership, and where they fail to take such an interest in its welfare it is retrogressing.

There are over 8,000 building material dealers in the United States, and we dare say that less than eight or nine per cent of them are affiliated with the N. B. S. A., notwithstanding the efforts that have been put forth by the association during the past two years to make its work known throughout the country. It is only further proof of the fact that the most effective work along these lines can be done by the members themselves and it is hoped that they will coöperate with the officers of the association in their present campaign. The campaign has just started, and while three new members were received the first week, which may be made to appear encouraging, the present membership could be doubled in a short while with a little united effort.

A personal invitation to make application for membership, extended by one who is already a member to an eligible candidate, will nine times out of ten prove successful, and the association needs the coöperation and support of all the building material dealers whose standing and interest in the welfare of the industry qualifies them for membership.

N. B. S. A. Notes.

Applications for membership have been received from the following dealers since the last issue:

F. A. Bigelow & Son, Peninsula, O.

Edward R. Pusey & Co., Wilmington, Del.

Sloan & Co., Chattanooga, Tenn.

Two of these applications were secured through the good offices of our members, and it is the earnest desire of the association that the entire membership follow the good example thus set.

The Southern section of the country is well represented in the association's membership list, and for some time it has felt the need of a field secretary who could coöperate to increase the activities in that direction and line up the many dealers who are non-members. The association believes that the right man has been secured in J. B. Moor, who is the Southern representative of the Reynolds Asphalt Shingle Co. and the All Roofing Mfg. Co. Mr. Moor is fully imbued with the spirit so necessary to make a success of this work and he has promised to make the other field men, including the Honorable Edward A. Foster, of Boston, work like the dickens this year to keep him from coming out at the top. We wish him the utmost success.

N. B. S. A. DIRECTORS' MEETING MAY 29.

James H. Allen, president of the National Builders' Supply Association, has issued a call to the executive committee of that association to meet in Chicago on Saturday, May 29, at the Hotel Sherman.

A period of four months has nearly elapsed since the time of the last convention and during that time several important committees have been at work on propositions which were launched at that meeting. One of these committees has had to do with the subject of mutual insurance, a proposition that made instant appeal to the association when it was first broached, and something definite may be looked for at the coming meeting.

There will also come up for decision at this meeting the time and place for the holding of the 1916 convention. The city of Cleveland is very anxious to entertain the association next February, during the time of their great Building Show, which they say will be a worthy rival to the annual show held in London, and from present indications, this looks like a good bet.

There will be many other matters of importance for this meeting and it is expected that there will be an entire attendance of the board of directors.

Dealers and Architects Discuss Contracts.

The first of a series of monthly luncheons to be given by the Contractors and Dealers' Exchange, of New Orleans, was held at the Hotel DeSoto, May 13. Eighty covers were laid and there was a guest for each. The feature of the first luncheon was a discussion of the new national building contract drawn up by the American Institute of Architects and approved by the National Association of Building Exchanges, the contract being discussed by a number of architects affiliated with the exchange. In this connection it is stated that the exchange and the local architects work together in a manner much stronger than in any other city boasting of a building exchange.

The luncheon itself was an entertaining and inviting repast prepared especially by Vic LeBeau. Herman H. Thomas, president of the exchange, acted as toastmaster, while Uncle Jim Aiken was master of ceremonies. The talks opened with a monologue from Billy Pfaff. Architects of the city followed with short talks in which the new contract was thoroughly approved.

Other talkers were Walter Jahncke, George M Leahy, Allen Tupper and L. Marx. They favored the new contract and endorsed a monthly luncheon feature, which was adopted.

The Contractors and Dealers' Exchange will be the distributors of the new contract in New Orleans territory.

REJECT UNETHICAL PLAN.

Because the plans and specifications for the new school building for the board of education at Grafton, Va., as prepared by Frank L. Packard, architect, of Columbus, O., were not based upon the new equitable contract documents as covered by agreement of the American Institute of Architects and the National Association of Builders' Exchanges, the members of the Louisville Builders' Exchange formally declined to submit proposals on the school building. In taking this action the exchange urged builders and others financially interested in building construction to use earnest efforts to get into general use "the wise and equitable principles of the new contract documents." The Louisville Builders' Exchange in its campaign is pointing out that the standardized specifications have been adopted by such men as Capt. Brinton B. Davis, one of the best-known architects in the South, and also by Building Inspector William J. O'Sullivan, of Louisville.

COURT HOLDS MATERIAL MAN RESPONSIBLE.

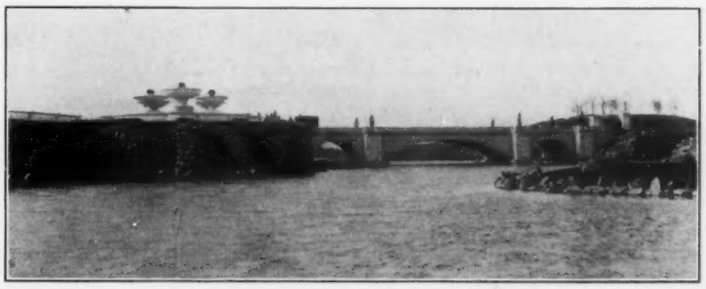
The Supreme Court of Michigan held the material company responsible for injuries to a workman, resulting from overloading the floor of a porch, in the case of Schneider versus C. H. Little Co. The decision is as follows:

A contractor knowing that material man was piling too great a weight upon the floor of the building being erected so as to endanger men working below, he would be liable for injuries from collapse of the floor; but it would be otherwise if he did not know anything about the condition created and had no reason to apprehend that it would be created. In plaintiff's action for injury from the collapse of a porch on which defendant's agent delivering to a contractor had piled bags of plaster causing the floor to collapse and the bags to fall and injure plaintiff, held on the evidence that the negligence of defendant's agent was for the injury.

CONCRETE

Decorations of the Duke Estate.

The employment of concrete as an aid in the beautification of nature reaches its ascendency in the estate of J. B. Duke, the tobacco king, at Somerville, N. J. In this particular instance perhaps as much emphasis can be laid upon its artistic possibilities as the landscape gardening necessary to bring this flat and almost destitute stretch of land to a state of restful and pleasing expanse of stream and woodland, made more ornate by its gleaming white reinforced concrete bridges, fountains, terraces, vases, urns, statuary, etc.



ARTIFICIAL LAKE, SHOWING FOUNTAIN AND BRIDGE, WITH MADE FOREST IN THE DISTANCE.

To Buckenham & Miller, well-known landscape engineers and architects, was given the task of converting the tract into its present condition by the making of hills, the planting of woods, the lifting of water by massive pumps from an adjoining river to the artificial lakes of the estate, and by other means at the command of experts in the profession. The concrete bridges which cross the lakes are 90 to 125 feet long, made of Medusa white Portland cement and white sand. The concrete stone was cast near the site and placed in position as needed, the work being backed with a gray Portland cement reinforced concrete.

One of the handsomest details of the estate is the mammoth white fountain, 80 feet in diameter, of Medusa white Portland cement and Medusa waterproofing added. The face of the fountain is set with rough, jagged rocks, over which the water flows throughout its entire edge, giving an effect of rugged splendor.

About 1,000 feet of ornamental balustrade, in irregular and broken form, surround the lakes, with wide step approaches of Medusa white Portland cement and white sand. The tract is further beautified by the use of concrete garden furniture of unique design, which is everywhere in evidence.

The general contractors were Richards & Gaston, of New York City, and 2,500 barrels of Medusa white Portland cement and several hundred pounds of Medusa waterproofing were used in bringing out the effect of old weathered Italian marble with white concrete stone. C. L. Miller & Co., New York, supplied the cement.

THIS BEAUTIFUL EXPANSE, ONCE A BARREN WASTE, MADE POSSIBLE BY CONCRETE.

John F. Will, a well-known cement contractor of Louisville, Ky., is finding the demand for his services good, as foundation work is plentiful.

MANY HUNDRED FEET OF ORNAMENTAL RAILING ARE USED IN THE ESTATE.

Concrete News in Brief.

The Roy C. Whayne Supply Co., of Louisville, Ky., reports that business has picked up wonderfully during the last few weeks. Besides standard equipment for building and road contractors, such as hoisting engines, concrete mixers, road machinery, etc., orders have been received for a quantity of excavating machinery. The company has added a new line of steel concrete forms manufactured by the Hydraulic Pressed Steel Co., of Cleveland. The points which make these forms desirable are their extreme flexibility and their adaptability to any type of construction. Working models have been set up in the company's office, and it is easily shown by these models that no skilled labor is needed in setting up or operating them.

The board of supervisors of San Francisco now has under consideration an ordinance permitting the use of concrete paving instead of asphaltum on the city streets. It is held by the advocates of the new ordinance that concrete has proven satisfactory on the state highway and elsewhere.

T. J. Morris, manufacturer of cement tile at Piqua, O., has bought a site on the Pan Handle Railroad there and will build a plant to manufacture cement posts.

M. E. Larkin, 35 Byrd Building, Memphis, Tenn., has lately reopened at that location to do concrete walks, walls and road building.

The building of concrete storage tanks at Kansas City by elevators will be one of the largest construction and supply features this year. It is reported that nearly all the elevators will increase their capacity soon. The promised large crop in Kansas of wheat, especially, following last year's bumper, will make necessary great capacity this fall and winter.

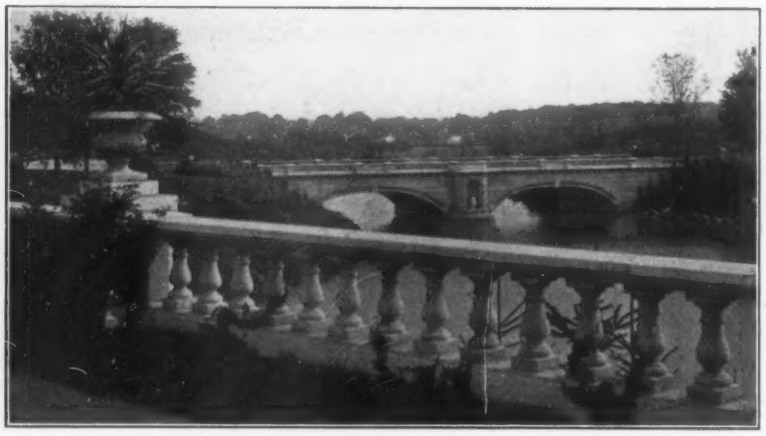
Cement blocks are in good demand in Louisville, Ky., according to the Central Concrete Construction Co., which is active at present in the construction of automobile garages of this material. The use of blocks for garage work makes a durable structure and also one of pleasing appearance, and the company is featuring this use accordingly.

Shelbyville, Ky., has adopted an ordinance requiring the construction of cement sidewalks on most of the principal streets in the town, and good sales of material will be made there. The work must be completed by August 1.

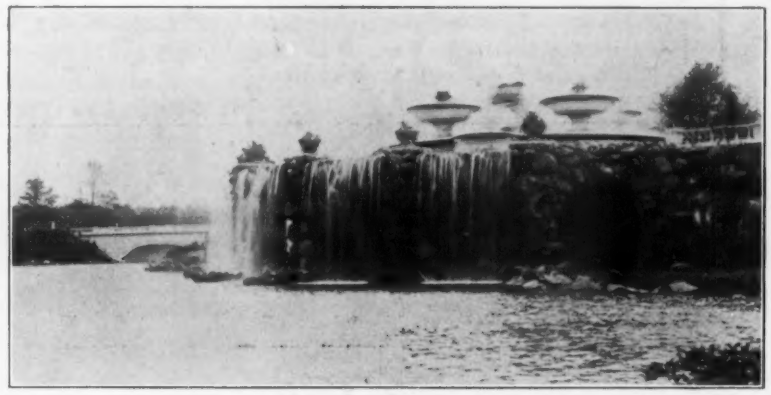
A quantity of new material is being installed in the plant of the Warren Planing Mill Co., Warren, Pa., for manufacture of cement blocks.

St. Joseph's Home, Stockton, Cal., has taken out a permit for the erection of a reinforced concrete building to cost $100,000.

The Agricultural Water Co., of Azusa, Cal., is laying two miles of concrete water mains. About four miles additional will be laid later in the year.



GENERAL VIEW OF THE J. B. DUKE ESTATE.



THE RUGGED AND THE SYMMETRICAL ARE COMBINED IN THIS IMPRESSIVE FOUNTAIN.

A Concrete Bridge Built for Strength.

During the past year one of the finest concrete bridges in the Middle West was constructed over the Grand river at the foot of Lyon street, in Grand Rapids, Mich. It was built for the Michigan Railway Co., which operates an interurban traction line from Kalamazoo to Grand Rapids, to support two sets of tracks leading to the passenger depot and terminal.

Work on the bridge, which has four river piers, two land piers and five spans; was started in June, 1913, by the National Concrete Co., of Indianapolis, Ind. A sub-contract for the piers was let to the G. W. Bunker Co., of Grand Rapids, a concern which had successfully handled the construction of the million-dollar concrete flood walls along the banks of the river several years before.

The Newaygo Portland Cement Co. furnished the bulk of the cement used, which was mixed in the ratio of six parts sand and gravel and one part cement. The Michigan Portland Cement Co., at Chelsea, Mich., also furnished some of the cement.

The bridge is located about 300 yards below a dam in water which is exceedingly swift and which has caused much trouble in the past with bridges of other types spanning the stream. Aside from the turbulence of the water the engineers were confronted with the knowledge that in severe winters the stream freezes to the bottom and the ice, dur-

CONCRETE BRIDGE AT GRAND RAPIDS, MICH.

ing the spring break-ups, exerts a great pressure which had been sufficient in the past to work great damage. Consequently the five caissons for the piers were sunk to a depth of 15 feet below the river bed, and after a thick layer of rock had been dumped the remaining space to the surface, nearly 10 feet, was filled with a coarse mixture of cement and rock. It is believed that this arrangement will successfully combat the elements. The bridge is 600 feet long and 25 feet wide.

CONCRETE POSTS FOR HOLLAND.

Because of the swampy condition of the Western part of Holland it has been necessary to use wooden piles for foundations for houses, viaducts, and other structures. Until lately the use of concrete in connection with these foundations had not been thought of, but a recent trial at Westerdok demonstrated the practicability of the reinforced concrete pile and as a result the system of building foundations in this part of Holland is rapidly changing.

Publicity for Concrete Roads.

The Lehigh Portland Cement Co. will devote an entire page advertisement in the May 22 issue of the Saturday Evening Post to the promotion of concrete roads. The advertisement is illustrated with two types of roads and aims to portray the ease with which travel may be conducted on the concrete road, as well as the cleanliness of the road and the satisfaction with which pedestrians use the road at the same time as vehicles. In addition to this advertisement, a national advertising campaign to be conducted on the same date is being presented to and receiving the coöperation of retail dealers. Similar advertisements will appear in local newspapers, and lantern slides will be shown in moving picture theaters throughout the entire country.

Atlas Has Highway Construction Booklet.

Coincident with this national advertising on the part of the Lehigh company is the distribution of a booklet, entitled "Concrete Highway Construction," by the Atlas Portland Cement Co. from the main office at 30 Broad street, New York City. The aim of the book is to teach those interested the methods of constructing concrete roads. Illustrations and tables show conclusively the proper methods of construction and the approximate cost as well as the number of men and equipment required for concrete road construction. A carefully prepared list of equipment, including a concrete mixer, a 10-ton roller and other necessary supplies, shows that a gang of 30 men can be equipped for work at a cost of $5,614.

One of the interesting questions always arising during the construction of a road is the source of water supply and the daily amount needed by the crew at work. This has received the attention of the Atlas authorities, as well as the proper proportioning of materials and the placing of reinforcement when such is required. The methods placing joints and providing for the curing of the finished road has also been considered. The book is generously supplied with halftone illustrations of concrete pavements, and illustrates the manner in which the conditions of communities can be improved through the use of cement.

FACTORY DEAL OF IMPORTANCE.

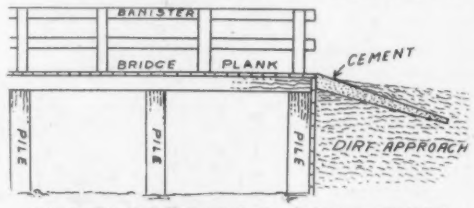
Oakland, Cal., May 15.—One of the biggest deals in weeks was completed the middle of April and under it the American-Portland Stone and Granite Co. will take over the plant formerly operated by the Interlocking Stone Co. at the foot of Ninth avenue. A certain amount of remodeling and new equipment has been installed, and John Henderson, the general manager, has just completed an elaborate exhibit that will be installed at the Panama-Pacific Exposition.

Senator J. F. Tyrrell is the president of the company; M. A. Nevin, vice president; and J. C. Scott, secretary and treasurer. They will manufacture cement brick, cement mantles, and high-class cement blocks, carved, plain or moulded for any building purpose.

CURE FOR "HIGH" BRIDGES.

W. E. Caldwell, of Burt county, Neb., is one of the successful farmers of that state who rides about in an automobile. Like all automobilists he deplores the "jump off" usually found at the end of bridges.

After a recent ride in his machine he sat down in his farm home and drew the accompanying illus-



CURE FOR "HIGH" BRIDGE—BURIED CEMENT APPROACH.

tration of a bridge and its approach, for the purpose of showing how the low place or jump off may be eliminated. The plan provides for a cement wing or apron the width of the bridge extending at an angle into the dirt approach. The outer end of the cement apron is covered with dirt. It makes no difference how much of the dirt wears away, just so the end of the approach is still covered. Due to the cement apron there will be no chuck holes in the roadway.

A concrete block manufacturing plant has been started at Pleasant Gap station, Pa., on the P. R. R., for the manufacture of concrete blocks for building purposes. They are manufacturing about 200 blocks per day and expect to increase to 500 per day. Blocks are manufactured with sand, cement and grit from White Rock quarries.

Robert Davis, of Theresa, N. Y., will conduct a cement block works in Pine street. All kinds of cement blocks, as well as cement brick, will be manufactured.

The Hendricks Mfg. & Construction Co., manufacturer of cement blocks, will enlarge its plant in Hendricks, Minn.

Martin Abramson, Ludington, Mich., is establishing a cement brick plant in that city.

The market place of the building material industry. Employment department, machinery wanted and for sale, etc. If your wants are not answered in this page, write a letter to this office.

THE FRANCIS PUBLISHING CO.
537 S. Dearborn Street Chicago, Illinois

:: THE :: BOURSE

Advertisements will be inserted in this section at the following rates:

For one insertion.....25 cents a line
For two insertions.....45 cents a line
For three insertions.....60 cents a line

Eight words of ordinary length make one line. Heading counts as two lines.
No display except the headings can be admitted.

Remittances should accompany the order. No extra charges for copy of paper containing the advertisement.

EMPLOYEES WANTED

HELP! HELP! HELP!

LET US HELP YOU.

We want employers who are looking for good help to advertise in the "Wanted Employees" column, because we know that they will get good results. ROCK PRODUCTS AND BUILDING MATERIALS.

PLANTS FOR SALE

FOR SALE—Fine Gravel Plant, equipped with first-class machinery for crushing, screening and washing gravel. Located just outside the city limits on Big 4 R. R. at Dayton, Ohio. WASHED GRAVEL & SAND CO., Dayton, Ohio.

FOR SALE—Star Lime Co. plant at Hannibal, Mo. A good first-class plant, four lime kilns, all necessary sheds for storage, and cooper shop, with switch track on the ground. About 100 acres land with the plant, or would dispose of the kilns, and quarries and a part of the land. A bargain for quick sale to any one wishing to engage in the manufacture of lime. STAR LIME CO., Hannibal, Mo.

BUSINESS OPPORTUNITIES

AN OPPORTUNITY—SAND LIME BRICK PLANT FOR SALE.

Ideally located—16 miles from Philadelphia on Atlantic City R. R. Capacity 20,000. Operating under the silo system and making a first-class brick, perfectly white. Plant includes one 150-h.p. Boiler and 100-h.p. Engine, one Rotary Press and one Upright Press. One 72-foot cylinder.

A GOOD PAYING PROPOSITION.

Excellent reason for selling.

PENBRYN BRICK CO., Bridgeton, N. J.

EMPLOYMENT WANTED

Capable Engineer, available at once, as superintendent or mechanical engineer on cement, lime or allied industries. Fifteen years' experience. Can show results. Address "T.," care ROCK PRODUCTS AND BUILDING MATERIALS.

ARE YOU LOOKING FOR EMPLOYMENT?

A small advertisement in the Employment column will make your wants known and help you to get a position. No difference what kind of a job you want—advertise in ROCK PRODUCTS AND BUILDING MATERIALS, as the paper is read by the people you want to reach. QUICK RETURNS.

WANTED—Position as Superintendent or would accept a position as Foreman of crushing plants or Lime. Thoroughly experienced both clerical and practical. Address Box 1052, care ROCK PRODUCTS AND BUILDING MATERIALS.

MACHINERY FOR SALE

FOR SALE—We can save you TWENTY-FIVE to FIFTY Dollars on a concrete Mixer. High grade machines, fully guaranteed. Get our prices before you buy. SUPERIOR MFG. CO., 1406 Concrete Ave., Waterloo, Iowa.

FOR SALE—Best empty cement bag baler, smallest price. Also brick and block machines. Address W. BARTEN, Gordon, Nebr.

FOR SALE

4—Porter Saddle Tank Locomotives, 36" gauge, 9 x 14 complete with steam brakes and all fittings. Two with steel cabs.
Price each .....$ 600.00

No. 0 Thew Steam Shovel on traction wheels, late type, high shop number.
Price 2150.00

35 tons relaying rail, 60-lb., complete with splice bars and bolts.
Price per gross ton..... 16.50

40 tons relaying rail, 40-lb., complete with splice bars and bolts.
Price per gross ton..... 16.50

2—Stiff Leg Derricks, 70' boom, steel bull wheel; all blocks and sheaves.
Price each 250.00

2—Guy Derricks, 50' booms, steel bull wheels; all complete.
Price each 200.00

The equipment listed above is in first-class condition and is the last of that used by the Northern Mississippi Power Company. We are naming these exceptionally low prices in order to close the same out immediately. We invite your inspection.

Willis Shaw Machinery Co.
423 New York Life Bldg. CHICAGO, ILLINOIS

CEMENT

Sales Conferences Needed.

There is a time in the history of every industry when men must come to themselves and realize that something besides volume must enter into the excuse for existence. In summing up the work of the cement industry and noting its wonderful increase in volume we cannot help but observe the fact that its profits are entirely too small for the money invested in plants, promotion work and management. Does it not seem ridiculous that an investment of $400,000,000, doing a business of $100,000,000 is not getting over $7,000,000 to $12,000,000 profit in the best years, and then doing business at $1,000,000 profit or sometimes $1,000,000 loss for the off years.

It occurs to us that the next move of the cement producers is to get together with the new Trade Commission and secure the privilege of a sales conference in which the sales manager will have the right to put all his information on the table, so that the meeting will be able to diagnose conditions as they really are. The business man would then not need to operate on the slim margin that has been current with most companies in the industry during the most aggressive period in the life of cement. Plants are shut down, operations working on half basis and many other features are coming along which on the face of them demonstrate clearly that the overhead charges are eating up the business. The slogan heretofore has been to "get volume—sell more cement—get every farmer to use an average of a barrel of cement a year; get every citizen in America to use one, two or five barrels of cement a year;" but there has been too little attention paid to the fact that every barrel of cement sold should be at a margin of at least 10 cents or 15 cents per barrel. This does not include overhead and selling expense, but means that there should be a net profit of 10 cents or 15 cents per barrel on every barrel manufactured and sold.

If this is not done in the future, how are the cement manufacturers going to pay off their bonds? How are they going to return to their stockholders 100 cents on the dollar in dividends in 20 years of life of their particular organizations?

There is no time like the present period wherein one can look at the real conditions as they are. Occasionally you will find a cement manufacturer who can make cement cheaper than the other fellow, but when manufacturers figure on making cement for less than 65 cents or 70 cents, they are just fooling themselves, and they are passing this "tom foolery" to a lot of people who cannot make cement for less than 80 cents. In other words, here is one of the greatest manufacturing industries in the world, and here we are fooling along, turning over the dollars invested in the business and getting a very slim margin, if any margin at all, on doing business.

We do not wish to reflect on the splendid progressive work that has been done in the promotion of cement, but we do say that now is the time this industry must check up on the cost and put the business on a basis so that money can be made. You will never do it as long as you are satisfied to go along and put the price down to where two-thirds of the manufacturers cannot live.

A cost doctor as a general proposition may be a theorist, but we feel satisfied that there are enough leaks in the cement industry to warrant a few cost doctors who might suggest that if the industry does not get together and work in harmony on values, its assets in the future will be more negative than they have been in the past. It is up to every individual manufacturer of cement to get busy on this proposition today, and let us see sales conferences which will show conclusively to every man in the business the necessity of a stable valuation that will net a profit even though the mills are making only 60,000,000 barrels of cement at the time. If you do not do so, you can just add one-third to the cost of cement at your present producing values, and you will see how much money you are losing on every barrel you sell.

This may sound like incendiary talk, but many a man has gone into the hands of a receiver because he did not know what he was doing and was too arrogant to take a second look. It is up to you, Mr. Manufacturer, to take that second look, and accept the responsibility of getting together with the other fellow and putting the industry where it belongs—on a money-making basis.

Cement Manufacturers in Spring Meeting.

The spring meeting of the Association of American Portland Cement Manufacturers was held at the Blackstone hotel, Chicago, May 10 to 13 inclusive. The gathering was well attended, there being more than 50 member companies represented by one or more officials, and several had pretty full delegations. Two days were devoted to committee work and the routine business of the organization. The publicity committee, which has achieved such wonderful results in the spread of the gospel of concrete and in finding new uses for cement, spent half a day in concentrated discussion of a bigger and stronger boost for the work that it has laid out for its members in popularizing cement, so that every man, woman and child in the length and breadth of the land shall know that cement is good for a great many things they use and need every day. If some of these fellows could have their way there would be cement stories in all of the lesson books used in the public schools, so that the first word the children learn how to spell correctly would be "cement," and the first thing they would learn how to employ in a useful way would be cement, also. In fact, with movie reels and high-class lectures they are putting cement information into the heads of thousands of people who could never get it in any other way.

The committee on technical research always has an interesting session at the regular meeting, in which the chemical features of cement and the physical behavior of concrete in practice are reviewed and considered.

Packages is always a subject of first importance at every cement meeting, for the reason that it is the cause of most of the trouble. The chairman of this committee exhibited a nonreturnable bag that only costs the consumer five cents. It has been introduced to some extent and everybody considers it to be a good thing, although its introduction was viewed with suspicion by those who are familiar with the never ending bag claims and bag adjustments. The matter of export packages was only mentioned causually, although this branch of the package question shows increasing importance with all of the manufacturers located at the Atlantic seaboard.

The uniform cost sheet and accident prevention were topically discussed and the meeting contained much edification for those who participated in its sessions.

On Wednesday afternoon a special train was provided to convey the delegates to inspect the concrete roads of Milwaukee county in Wisconsin. The system of roads in Milwaukee county is one of the best examples of an extended mileage of concrete road in existence, and in riding over the roads in automobiles nearly every member of the party freely expressed great satisfaction and appreciation of the splendid showing made, and many declared them to be the finest roads they had ever seen.

On Wednesday evening an informal dinner was served, at which several amusing stunts were "pulled off" and a very pleasant three hours passed in social fellowship.

B. F. Affleck, president of the Universal Portland Cement Co., Chicago, Ill., was elected a member of the executive committee of the association.

Two companies were elected to membership: The Marquette Cement Manufacturing Co., Chicago, Ill., and the International Portland Cement Co., Spokane, Wash.

Particular interest was taken by all of the members in the prospects for concrete road construction during the present year. Reports from the Philadelphia office of the association showed that no less than 20,000,000 square yards of concrete road would be constructed in 1915, being a considerable increase over last year.

The next meeting of the association will be held at Atlantic City, N. J., on September 13-16, 1915.

Registered Attendance.

Allentown Portland Cement Co.—J. W. Fuller.
Alpha Portland Cement Co.—G. S. Brown, F. M. Coogan and Edw. Hennessy.
Alsen's Amer. Portland Cement Works—R. S. Sinclair.
Ash Grove Lime & Portland Cement Co.—L. T. Sunderland.
Atlas Portland Cement Co.—John R. Morron, D. H. McFarland and Mr. Connell.
Castalia Portland Cement Co.—Geo. W. Hackett.
Chicago Portland Cement Co.—Norman D. Fraser, J. U. C. McDaniel, H. S. Turner, D. Ross Fraser, A. G. Gates and J. J. Commons.
Clinchfield Portland Cement Corp.—John A. Miller, W. M. Bennett, W. E. Law and Morris M. Hunter.
Colorado Portland Cement Co.—Clark M. Moore.
Crescent Portland Cement Co.—R. H. Hughes, Chas. Schmutz, David M. Kirk and W. H. Murray.
Cape Girardeau Portland Cement Co.—W. H. Harrison.
Dexter Portland Cement Co.—John A. Miller, R. W. Hilles and Jos. Brobston.
Diamond Portland Cement Co.—Lyman A. Reed.
Dixie Portland Cement Co.—Richard Hardy and J. H. Dalbey.
Giant Portland Cement Co.—R. E. Griffith, Chas. F. Conn and O. D. Hovard.
Helderberg Cement Co.—F. W. Kelley.
Huron Portland Cement Co.—J. W. Boardman, Jr., and S. T. Crapo.
Iola Portland Cement Co.—H. C. Koch and H. Struckmann.
Iowa Portland Cement Co.—B. C. Condon.
Ironton Portland Cement Co.—A. C. Steece.
International Portland Cement Co.—J. S. Irvin and Chas. A. Irvin.
Lawrence Portland Cement Co.—E. R. Ackerman and Frank H. Smith.
Lehigh Portland Cement Co.—E. M. Young, W. E. Veits, B. L. Swett, C. B. Rogers, Ernest Ashton, W. A. Fuchs, A. Y. Gowen, L. M. Dauback, H. M. Scott and S. B. Chittenden, Jr.
Louisville Cement Co.—W. S. Speed.
Marquette Cement Mfg. Co.—Theo. Dickinson, Wm. Dickinson, E. J. Dalton, Stuart Duncan, Gold Williams and John Evans.
Michigan Portland Cement Co.—N. S. Potter, Jr.
New Aetna Portland Cement Co.—O. J. Lingemann.
Newaygo Portland Cement Co.—D. McCool, J. F. Lockley and J. B. John.

Northwestern States Port. Cement Co.—C. H. McNider.
Oklahoma Portland Cement Co.—Adam L. Beck.
Peerless Portland Cement Co.—W. M. Hatch.
Peninsular Portland Cement Co.—J. W. Shove.
Phoenix Portland Cement Co.—J. W. Waller and Ira L. Gilkyson.
Sandusky Portland Cement Co.—S. B. Newberry, Arthur C. Newberry, W. B. Newberry, F. L. Printy, F. L. Jorgenson, H. D. Jenkins and W. K. Evans.
Security Cement & Lime Co.—L. A. Cover and John K. Barbour.
Trinity Portland Cement Co.—H. R. Breck.
Standard Portland Cement Co.—J. I. McCants.
Superior Portland Cement Co.—Guy W. Mallon.
Texas Portland Cement Co.—F. R. Bissell.
Tidewater Portland Cement Co.—B. T. Scott and E. R. Stapleton.
Union Sand & Material Co.—A. H. Craney, Jr., H. L. Block and H. P. Johnson.
United States Portland Cement Co.—J. E. Zahn.
Universal Portland Cement Co.—B. F. Affleck, W. M. Kinney, O. N. Lindahl, Geo. S. Bartlett, C. S. Fletcher, B. S. Smith, R. F. Hall and M. Carlson.
Virginia Portland Cement Co.—H. M. Fetter.
Vulcanite Portland Cement Co.—J. B. Lober, Albert Moyer and W. D. Lober.
Western States Portland Cement Co.—A. W. Shulthis and C. B. McVay.
Wolverine Portland Cement Co.—L. M. Wing and W. E. Cobean.
Canada Cement Co., Ltd.—F. P. Jones, W. H. Ford and H. L. Doble.
E. M. Hagar, Chicago, Ill.
Morris Metcalf, Chicago, Ill.
Gordon Wilson, Chicago, Ill.
J. P. Beck, Chicago, Ill.
C. W. Boynton, Chicago, Ill.
B. H. Rader, Chicago, Ill.
Leonard C. Wasson, president, American Concrete Institute, Philadelphia, Pa.
Percy H. Wilson, secretary, Association of American Portland Cement Manufacturers, Philadelphia, Pa.
Lewis R. Ferguson, assistant secretary, Association of American Portland Cement Manufacturers, Philadelphia, Pa.
Col. J. W. Fuller and H. G. Barnhurst, represented the Fuller Engineering Co., of Allentown, Pa.
T. W. Fuller and H. C. Shields represented the Lehigh Car Wheel and Axle Works, of Catasauqua, Pa.
Geo. M. Newcomer represented F. L. Smidth & Co., engineers, of New York City.
A. M. Bates represented the Bates Valve Bag Co., of Chicago.

Egyptian Plant Again in Operation

The Portland cement plant located at Fenton, Mich., is again in operation after a complete shut down of a number of years. Many improvements have been made in the mill, which is now said to be among the finest wet process plants in the country. The company behind the present project is

HARRY J. PAXTON.

known as the New Egyptian Portland Cement Co., and has its offices at 1514 Dime Bank building, Detroit, Mich. Harry J. Paxton, who was formerly with the Huron and Wyandotte Portland Cement companies, is president of the concern and has as his associate John A. Mercier, of Detroit.

The mill at Fenton is now equipped with nine kilns, six feet in diameter and eight feet in length. A new steel shovel, a disintegrater and a tug and two scows have been installed for the handling of the marl from the lake to the mill. A considerable amount of new track has also been installed for the handling and switching of cars. Everything has been put in first-class condition and wherever possible improvements have been made around the plant. Operations were commenced about April 20, the plant producing an elegant grade of cement which is being shipped about as fast as it can be made.

Harry J. Paxton, president of the company, has been associated with the Portland cement industry for a number of years and is well known to men in the trade, while John A. Mercier, who has confined his activities almost exclusively to the city of Detroit, has not had the opportunity of becoming so widely acquainted among cement men. Mr. Mercier is a large contractor and is at present constructing an 1,800-foot tunnel under Congress street, Detroit, for the Central Heating Co. The tunnel is 45 feet below street level and is of horseshoe shape, eight-foot bore and made of brick. When completed it will house the 30-inch steam pipes of the Central Heating Co. In addition to his work as a contractor, Mr. Mercier is a stockholder and director of the Home & Wayne County Savings bank, a director of the German-American bank, president of the Spring Wells bank, as well as a director of several large manufacturing institutions of Detroit. He is a man of determination and possesses a spirit of progressiveness which accounts for the success he has made in all of his undertakings and which likewise predicts his enthusiastic cooperation in the new enterprise. He is vice-president of the new concern, of which he has a two-fifths interest. President Paxton holds the other three-fifths of the stock, of which there is none for sale, thereby making of the new company a close corporation.

Since the purchase of the property at Fenton last fall, friends of Mr. Paxton have showered upon him their best wishes for his success, and the manner in which he has quietly but actively gone ahead with the proposition assures them that they were not mistaken in their predictions that he would make a success of the New Egyptian Portland Cement Co.

CLINCHFIELD'S NEW OFFICES.

In the April 22 issue the new offices of the Clinchfield Portland Cement Corporation were stated to be in the "Union Press" building, Cincinnati, Ohio, whereas it should have read "Union Trust" building. The company advises that the offices are now open and that it is ready to do business, although it will not be in position to take any orders or make shipments in the Cincinnati territory until after July 1, as it is depending entirely upon the completion of the Elkhorn City branch of the C. C. & O. railroad, which is now practically completed.

PLANT OF THE EGYPTIAN PORTLAND CEMENT CO.

SECURITY CHEMIST GOES TO NEBRASKA.

William A. Hopkins has resigned his position as chemist at plant No. 1 of the Security Cement & Lime Co., Hagerstown, Md., to accept a position as chief chemist at the new plant of the Nebraska Portland Cement Co., Omaha, Neb., whose rated capacity will be approximately 2,000 barrels a day, to be drawn from an unlimited supply of limestone and shale, raw materials of practically identical analysis with those from which Security Portland cement has been manufactured and made its enviable record.

Mr. Hopkins' preliminary education was obtained at Miller's industrial school, near Crozet, Va., from which he was graduated with highest honors. This foundation, plus his five years' experience at the Security plant, should easily enable him to produce a uniform and satisfactory Portland cement for his new connection.

Mr. Hopkins carries to his new position the best wishes and every element of good will of the entire

JOHN A. MERCIER.

personnel of the Security Cement & Lime Co., for his success, both because of his pleasant and agreeable disposition shown as a co-worker and his careful, conscientious and able work in the Security company's laboratory.

The tenth annual Mid-West Cement show will be held at the Auditorium in Omaha, Neb., Feb. 29 to March 4, 1916. The management was able to arrive at this arrangement and to make an early announcement because of the coöperation which has been extended on all sides and the willingness of past and prospective exhibitors to participate in the coming exhibition. In spite of the disagreeable weather, featured by heavy snowstorms during the ninth annual convention this year, the exhibitors generally were satisfied with the results of their efforts and readily applied for space in the 1916 show.

Are you a member of the Bourse Family? A welcome awaits you.

LIME

There Are Hydrates and Hydrates

Long before there was any commercial recognition for hydrated lime we began a systematic advocacy of the improvement of the product by the route of hydration to make it more commercial and to attain at the same time an efficiency in the product which we were convinced could not be practically delivered to the building trade by any other form of lime. This course was adopted after very careful study, comprehensive experimentation and a great deal of research work in making comparisons, etc. Being convinced in this way that it was possible to really hydrate practically every sample of lime that we had access to at the time we felt, after our deductions with regard to the possibilities of improving the product and giving to the lime manufacturers the benefit of a more commercial material and the consumer a more efficient product, that it was time to exploit such a course in this journal.

Parallel with this work, there was always present the encouragement of two or three practical minds who were well established in their own beliefs with regard to the particular types of lime with which they were themselves familiar. From the first announcement to the present time we have never had to abridge or amend any statement that we ever made with regard to hydrated lime. The product has made good, and those men who were the first in the field and gave our every effort so much encouragement have made good, and are leading lights in the great hydrating industry of the country today.

The commercial hydration of lime is one of the greatest achievements of the age. It is the only important improvement that has ever been made in the venerable lime industry, which reaches back into history as far as the time of the Egyptian builders who began the structural achievements of the stone age. Besides all this, hydrated lime is distinctly an American improvement. Commercial hydration was never attempted in any foreign country until after we had fairly established the product in the markets of the United States.

In the beginning of these things, when this journal was first recognized as the only champion of hydrated lime, our correspondence was filled with letters from self-styled practical experts who denounced the idea of the hydration of lime, always declaring that hydrated lime was simply spoiled lump lime or insisting that hydrated lime was good for nothing and most particularly not adapted for the uses in which the writer of the letter happened to be particularly versed, and considering himself to be exceptionally well posted.

We patiently waded through a storm of criticism and abuse and answered every letter that came in a consistent spirit of good will in which we declared that nearly all limes, when properly burned, could be hydrated, and so put into a condition that it would keep in storage for an indefinite period without any special arrangements being made for keeping it in stock. Merely to pile the bags on a dry warehouse floor was considered preposterous by the people who handled lime at that time.

We also declared that our investigations had shown that probably 90 per cent of the lime used in the ordinary way in mortar boxes according to American building practice was spoiled and made useless by improper handling and the ignorant use of water in reducing lump lime to the putty state. In fact, we found that it was quite difficult, even under laboratory conditions, to get much above 50 per cent of any given sample of lump lime into the state of a true putty without giving the paste a considerable length of time to develop its useful properties.

We found that hydration made it practically impossible to spoil the lime at the job or to destroy its valuable characteristics through ignorance or lack of attention. Our recommendations from the start gave a specification for mason's mortar to consist of 85 per cent of Portland cement and 15 per cent of hydrated lime to be used as the active agent in masonry mortars to be used below ground, and 85 per cent of hydrated lime to be 15 per cent of Portland cement for use in masonry mortars above ground. These are the proportions which have been universally adopted, and which have given universal satisfaction everywhere.

In view of the record made in more than 10 years of practical use it now appears that little or no improvement can be made in these proportions, and it is a gratification to us and all those who have coöperated in the work of introducing hydrated lime that we have never been mistaken or made any false moves that had to be corrected or changed afterwards.

For a long time the criticisms, complaints and contradictions grew less from time to time and finally disappeared altogether, as the trade of the country became convinced that hydrated lime was the only sensible form in which to use that indispensable building material.

There have always been two or three fighting opponents of hydrated lime in as many of the important markets who derived their supplies from the offal of certain chemical processes by which they obtained a material that is really a hydrate of lime of extremely low quality, which they have systematically forced upon their customers who insist upon buying hydrated lime, in order to make them lose confidence in all hydrated lime and in this way force such customers to continue the use of lump lime. This kind of tactics succeeded for a while, but it has in a great measure petered out because the onrushing wave of good hydrates simply overwhelmed the competition of the worthless material by the customers learning the names of the brands of hydrates which they knew could be depended upon. The trade in the bad or decoy hydrate lost out because it had no brand and the customers insisted on bags that carried the brand of the manufacturer, and so this kind of competition to real commercial hydrate has practically disappeared.

During the past few months we have received several letters complaining of bad results with the use of hydrated lime in masonry mortars that were mixed according to specifications that were published in these columns. Some correspondence ensued, and later an investigation. There is no question in either of the cases but that the mortar described in the complaint was in fact a failure. After carefully studying the whole matter, it is traceable solely to the lime. It may be that the concerns who produced the hydrates in question prefer to market their lime in lump form, and only intend to make a low-grade hydrate for agricultural purposes or for some other special uses where good commercial hydrate is not required or wanted. There are such classifications of lime produced and marketed. Some manufacturers brand this kind of lime as "common hydate" and others print on the bag a phrase denoting what purpose the contents are designed to meet. The use of all such hydrates in mortar or plaster mixtures would result very unsatisfactorily, if not an outright failure.

It is possible that some manufacturers who prefer to sell their lime in bulk might purposely make a poor specimen of hydrate for the purpose of causing their customers dissatisfaction and thereby driving such customers into the use of their lump lime in bulk. Such a course on the part of any lime manufacturer in these days would be very shortsighted and could lead to nothing short of disaster.

If a man expects to succeed in the lime business and he puts a hydrate on the market, it is only good business for him to put the best hydrate in his branded bag that he can possibly manufacture. Hydrated lime is too important a factor in any building operation and at the same time too insignificant an item of the total cost of the operation for any builder or contractor with enough sense to guide a mosquito in his flight to balk at the price, which has always been reasonable and equitable. At the same time, the purchaser is entitled to get a good product, a real commercial hydrate of lime, when he pays the price. There are so many concerns in the country who are putting their best efforts into producing the highest type of product that they can manufacture as to leave no excuse for any man to buy from one who is not conducting his business on such a basis.

The standard commercial hydrates are entirely dependable. There will never be a brand of hydrate advertised in the pages of this journal one insertion after we find that the product is not what it ought to be, nor what we claim good commercial hydrate has to be to merit the broad endorsement that we have given to the whole industry. In this way our advertising pages are the safest guide to the purchaser of hydrates in all of the markets of this country.

All of the parties referred to in the above discussion are subscribers and readers of these columns regularly, and while we are not using any names and don't intend to allow personalities to enter into such a matter, we do say with all earnestness that it is high time that these foolish types of opposition to real hydrated lime be dropped and eliminated. There is no use longer to try to continue such tactics for we simply will not stand for it.

In the matter of making different grades of hydrates, manufacturers should by all means plainly brand their bags "not to be used in building operations" if they see fit to sell an inferior grade that would cause disaster when used for mortars and plasters. It will be of great benefit to their own best brands as well as to the trade at large to religiously and carefully follow such a course in the printing of the labels of second quality hydrate.

TO INSTALL SECOND HYDRATOR.

The Lee Lime Co., Lee, Mass., is about to install another hydrator, after which the plant will have a capacity of 200 tons of hydrated lime per day. The present plant is equipped with a Kritzer hydrator.

Hurst Plant to Continue Operations.

According to the will of the late Alfred Hurst, who operated a lime plant at Hurstville, Ia., under the name of Alfred Hurst & Co., the estate will be held intact for five years and the lime business continue as in the past. His son, A. A. Hurst, is executor of the estate and will manage the business.

Alfred Hurst, who was born in Hull, England, Nov. 19, 1846, came with his parents to America at the age of six years, arriving in the harbor of New Orleans, and making his way to Davenport, Ia. Though a youngster at the time, he enlisted in transportation service during the Civil war, after which he returned to Davenport where he learned the stone mason's trade. As soon as the railroads were opened to Maquoketa, Ia., he journeyed to that city for the purpose of finding a suitable location for the manufacture of lime. On April 4, 1870, he started to clear land and prepared to erect a pot kiln on the site where the present plant at Hurstville now stands. He did most of his own work for the first few weeks, but as the trade increased he found it necessary to hire men to assist him. One of these, Jacob Eggerstedt, is still with the company as foreman.

In addition to the business of Alfred Hurst & Co., he owned and operated the old pinhook property known as the Maquoketa Lime Co.'s plant. He also owned and operated 2,982 acres of land in Jackson county, Ia., as well as a ranch in Missouri.

A. A. Hurst, who will act as executor of the estate, started to work in the office of his father at Hurstville on Feb. 23, 1894, and later became assistant manager. On Jan. 1, 1899, he accepted the position of manager of all of his father's property and continued to work in that capacity until the day of his father's death.

A strictly wood burnt lime is produced at the Hurstville plant and is sold to the trade under the slogan "The Best White Lime on Earth."

When to Apply Lime.

"The best time to apply lime," says M. A. Pachtell of the Ohio Agricultural College, "is during the preparation of the seed bed for corn. The thorough cultivation of this crop mixes the lime with the upper soil. By the time clover is sown on that soil the lime has changed it from a sour to a sweet condition. The time for applying lime, however, admits of wide variation. Usually a busy spring compels the farmer to spend his time in getting ready for the season's planting. If liming is neglected it can be done at the time of the preparation of the seed bed for wheat.

Lime should not be applied to the surface and immediately plowed under, as this tends to place it too far from the surface where it is needed. Neither should the caustic forms, hydrated lime and quicklime, be applied in connection with manure and fertilizers. It is better to plow the manure under and put the lime on top of the soil. In case the manure is desired for top-dressing, the lime should be worked into the soil at least two weeks prior to application of the manure. Likewise it is well to apply the lime sometime previous to commercial fertilizers.

WIN RICH LIME DEPOSITS.

Seattle, Wash., May 15.—Galbraith, Bacon & Co. have won their contest with the forestry service for the possession of a tract of land in Snohomish county, near Darrington, containing valuable lime deposits.

The tract was located in 1908 and includes 640 acres. Four years later the forestry service approved the issuance of a patent for the reason that the land was not chiefly valuable for its limestone deposits, but its timber. The Seattle land office, after a series of hearings, overruled the claim made by the forestry department. An appeal was then taken to the commissioner of the general land office, who affirmed the decision of the Seattle land office.

James E. Galbraith said a few days ago that while $1,000,000 was ready for the development of the property there would now be some delay on account of the condition of the money market, but with a clear title from the government the near future would see work begun.

WILL OPEN NEW QUARRY.

Within a few weeks the F. W. Waite Lime Co. will open up its plant between Glen Falls and Hudson Falls. A tramway a half-mile in length will be constructed from the quarry to the kilns. This quarry has never been worked for limestone and it is believed that there is stone sufficient to keep the company's kilns burning for a period of 25 years.

Superior Manufacturing Co., Harold Veblen, manager, Superior, Wis., suffered a fire recently, which destroyed lime kilns and damaged the warehouse at a loss of $50,000.

NEW INCORPORATIONS.

Goose Creek Lime Works, Middleburg, Va.; recently incorporated with $25,000 capital; incorporators, D. S. Sands, Jr., president, and Otto Furr, secretary; proposes developing land shortly.

The Taylor Lime Co.; capital, $25,000; organized by W. H. Taylor, Martin Forrest and H. F. Prince, Los Angeles, Cal.

The Black-Haywood Lime Co., Somerset, Ohio; G. Homer Haywood and others; $1,000.

Mill City Lime & Cement Co., Minneapolis, Minn., has been incorporated with $50,000 capital by Robert Magnuson, August Magnuson and Dan Rolland.

NEW LIME PLANT FOR VERMONT.

The Vermont Marble Co. has just placed a contract with the Fuller Engineering Co., of Allentown, Pa., for the construction of a large rotary kiln lime plant at its works at West Rutland, Vt. Included in the equipment will be a complete Kritzer hydrating outfit. Producer gas will be used for burning.

With the QUARRIES

Locomotive Cranes to Economize Storage

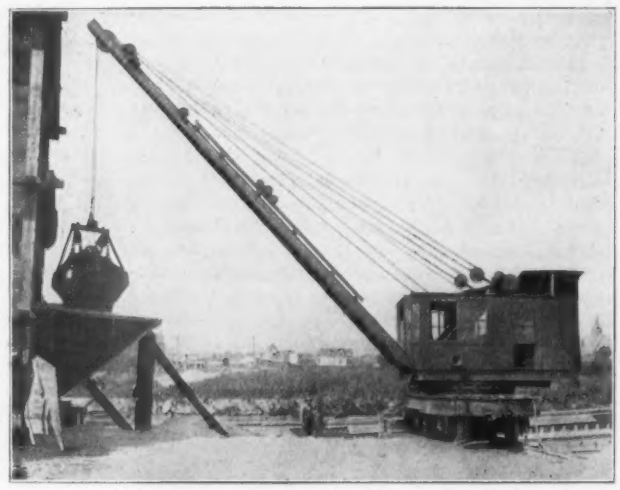
Modern developments of the locomotive crane, taken together with the perfection of its application for handling, storing and reclaiming large quantities of loose materials, such as sand, coal, crushed rock cinders and the like, has introduced a new angle for the study of the economies that are possible to bring into commercial practice in connection with the marketing of these indispensable materials. The growth of volume of the demand for crushed rock in the past 10 years has been one of the most marvelous achievements of the present age. Specifications of road engineers and of concrete contractors have caused the introduction of a wide range of sizes, so that the separating or screening department of the modern crushing plant has become its most essential feature.

In the matter of handling coal, sand and cinders, or any other material that is manipulated without separation, it was easy to work out. In such fields the locomotive crane has proved an efficiency which gives it a place of its own unchallenged for all time as the most economical means for reclaiming and rehandling large quantities of very cheap materials where the minimum cost of operation must always be the deciding factor in the matter of equipment.

The unlimited storage of the product of the crusher in a large number of different sizes is a more complex engineering problem and one which will have to be properly worked out in the very near future as the culminating step in the perfection of the equipment of the ideal crusher plant, so as to secure final top efficiency according to modern commercial conditions.

Every rock crushing plant is of necessity located alongside of a stone deposit amidst rural surroundings, or at least in the outskirts of a city or town, while the general offices and sales department are almost invariably located in an office building of the city where the product of the crushing plant finds its principal market. The problem of the sales management is to provide orders for the shipment of the product regularly in the proportion that the screen at the plant makes the separation of the material. Bin capacity is provided, let us say, to hold a full week's run of each of the several sizes separated by the screen, so that if the sales management in the unit of one week's operation can relieve all of the bins and keep all the customers satisfied with the regularity of deliveries, it will have accomplished 100 per cent efficiency.

If such a thing has ever been achieved, we have never seen or heard of its record. Indeed, for a plant to provide bin capacity for a full week's run of all the sizes separated by the screen is not always the case, and it is customarily considered that the regularity of the operation of a crushing plant depends absolutely upon its storage capacity and the ability of the sales management to maintain the equilibrium or proportion of the shipping orders that will clear the bins. Every sales manager of a crushing establishment will at once recognize the wonderful facility that would be given to the extension of business if he could be provided with unlimited storage without additional cost of production for any and all the sizes of product. By the application of a properly designed and equipped locomotive crane this long-needed improvement for the rock crushing industry can be provided, and with the coöperation of the best enginering brains at the command of the machinery builders will see the promise of working this problem out in the very near future.



LOADING CRUSHED LIMESTONE AT PLANT OF ARTESIAN LIME AND STONE CO.'S WORKS.

COMMENCING OPERATIONS AT THE HAINESPORT MINING CO.'S SAND AND GRAVEL PIT.

There are several limitations to the old-established idea of storage bins, and practice has taught us many factors of cost in connection therewith that have become second nature in the minds of practical crusher men. The length of the initial elevator belt that carries the material as discharged from the crusher to the screen is the first item of cost to be decided in the installation of a crusher plant. The amount of power required to drive each of the crushers is a known and constant element of cost. It is quoted by the builder of each machine as a part of its description, and is nearly always about correct. The amount of power required to drive a screen of any given size is also known and provided for with equal accuracy, but the amount of power and the size of the pulley required to drive the initial elevator varies with every plant according to the distance between the pulleys, center to center, and the cost increases directly in the ratio of the increased distance between the pulleys. Forty feet, center to center, is considered to be about the limit for economical operation. Every foot additional increases the cost of operation, and 75 feet, center to center, has long been considered the limit of practicability from a physical standpoint, and beyond the bounds of a reasonable cost basis.

There are few crushers indeed that have screens hung higher than 60 feet above the discharge pit of the initial crusher. Feed chutes to carry the product from the various screen separations must be given a very steep angle, so as to keep clear of the rapidly accumulating material, in order that the distance the chute can reach limits the top level of the bin it feeds by gravity.

In plants where six or seven separations are

OPERATING IN THE HAINESPORT MINING CO.'S PIT. THIS IS NOT A RIVER, BUT A SAND PIT.

made, the bins become a series of narrow, tall pockets, usually of wooden construction and liberally braced with steel tie-rods. The bottom is made of heavy joists, set edgewise, and well supported in short spans, because the superimposed tonnage is very great when the bins are filled. Headway is left beneath the bin for a standard locomotive to pass under with its train of cars so that the cars may stop beneath the bins to be filled by opening a bottom slide door to allow the contents of the bins to run through and so load the car.

Forty to 50 tons is the average size of modern railroad cars, such as are furnished by railroads to rock crushing plants. The 100,000-pound capacity car is getting to be more numerous than the 80,000-pound capacity car, and the tendency is for future construction of such cars to come to the unit of 50 tons, so that the larger sized car is the only one we can figure upon. It will take just 40 cubic yards of bin capacity for each car loaded at the crushing plant, and this represents a standing investment of $200, if we take the old standard of unit bin construction of $5.00 per cubic yard. But it has developed in the last few years that good wooden storage bins have been costing a net $6.50 per cubic yard, and this is the safest figure to take, so that the investment per carload in bin capacity represents really $260.

Take an average crusher plant producing 1,000 cubic yards per day in six sizes: A week's run would represent an enormous storage capacity, absolutely indispensable for conducting the commercial branch of the business upon the one-week unit of six days, representing 6,000 tons, and making the bins cost fully $40,000 as a first investment. The upkeep of bins is a very large item, because the irregularity of such enormous loads in structures shaped as bins must necessarily make them deteriorate more rapidly than any other kind of building. Some operators charge off only 10 per cent per annum for depreciation; others consider 25 per cent more nearly correct, and the latter is probably nearer to the correct adjustment for a crusher plant running continuously through a busy season. There is no class of machinery or equipment that gets a comparable heavy duty and its resultant wear and tear with that employed in the business of crushing rock. While such bin capacity is all that is ever provided, and much more than a majority of the plants ever have, it is entirely inadequate to bring the rock crushing business into the commercial field upon a basis that is parallel to other industrial enterprises.

Storage capacity should be limitless, so that every available working hour can be devoted to driving the heavy machines at or near capacity, without regard to limitations beyond the screen in the plant, or the indeterminate factor of the selection of sizes that the specifications make. Sometimes it is easy to sell 1½" size to the amount of hundreds of carloads while nobody wants 2" size or 2½" at all, and only a carload here and there of 1" size can be moved. Two weeks hence another specification is likely to call for a long line of cars in the 2½" size, while no man can be found who would accept one car of the 1½" size as a gracious gift—and so it goes, week in and week out.

Many times the salesman with the telephone receiver at his ear is compelled to shout, "We can't take any more orders in the 1½" size, but would like to take your order for 2½"." "Nothing doing," is the reply, and so the plant gets choked off, and in order to move the 2½" size a big concession in price is made to get it out of the bins and out of the way. In less than two weeks another specification calls for the 2½" size, and would be glad to get it at full price, and thus the inside losses accumulate on account of the lack of storage capacity. There never was a man who sold crushed rock in the market who will not recognize this picture as the familiar scene of his daily business.

Locomotive Crane as a Substitute for Bins.

Now, by the introduction of the locomotive crane it seems entirely feasible to do away with the bins altogether, merely providing hoppers beneath the screen to catch the various sizes and convey the separated product from the hopper to storage piles of practically unlimited capacity, since it is merely piled upon the ground, along the track upon which a locomotive crane operates to reclaim the material with a clam-shell bucket and load the cars with sizes ordered. Such locomotive cranes, operated by two men and having a capacity of 4,000 yards per day, can be provided at any plant with a lower first cost than the bin capacity just mentioned, with the additional advantage of introducing the possibilities of the shipment of 4,000 yards in one day, even in the rush season, from a plant that is only producing 1,000 yards. The surplus energy which now goes to waste in such a plant can accumulate a product which does not have to be sacrificed in price in order to move it and provides a way for the continuous maximum output of the plant.

When the locomotive crane application to crushing operations is fully perfected, the rock crushing plant will become a mill and take its rank with other industries that can be operated upon the basis of known factors to produce expected results, and not leave open the wide divergence which now is always present between previous calculations and completed performances. We realize that there are practical experts who know how to make allowance for all of the variable gaps and irregularities that occur in the crushing business as constituted today. These will be the first to recognize the expansion of output made possible by the application of the now well-known principles of locomotive crane operation.

There has been considerable study, and several experiments with greater or less success, in the matter of improvement in the storage end of the crusher plant, and we invite the coöperation of all of those who have been working out ideas of this kind in a campaign in these columns to solve this most important factor, once and for all. We will have future articles on this topic and want all of

LOCOMOTIVE CRANE USED IN LOADING CRUSHED STONE AT PLANT OF SOLVAY PROCESS CO.

our readers to get the full benefit of the discussion and conclusions reached thereby.

We present herewith a number of illustrations showing the achievements that locomotive cranes have made most succesfully and economically in the handling and reclaiming of cheap materials that run into great tonnages.

The Solvay Process Co., of Syracuse, N. Y., uses a locomotive crane for handling crushed limestone at its plant. It is a 15-foot gauge electric crane on a four-wheel truck, having a 75-horsepower motor. The boom is 75 feet long and a 1½-yard bucket is used.

The McAndrews & Forbes Co., Camden, N. J., has a standard gauge steam locomotive crane on a four-wheel truck, having a 38-foot boom, and equipped with a 1½-yard bucket which it uses for reclaiming coal at their docks in the Delaware river. The same locomotive crane is used for loading cars which convey the coal into its works.

owns and operates a McMyler Interstate crane, fitted with the McMyler Interstate Co.'s "multi-power" bucket. In the accompanying illustration it is shown handling crushed limestone and has solved a perplexing problem for the Artesian company through the economical handling of crushed stone.

Cranes are now being used almost universally for the loading and unloading from ships to cars and from cars to ships. German operators in the steel industry, in the cement industry and in the lime industry have perfected the use of cranes probably to a higher degree of efficiency than elsewhere. In our own country the steel industry is making very wide use of locomotive cranes for loading and unloading ore, fluxstone, cinders, slag, scrap-iron and for many other purposes.

The whole problem of the crushed stone industry at present seems to be merely a matter of engineering detail and a knowledge of the actual require-

UNLOADING BARGES AT WHARVES OF THE McANDREWS & FORBES CO.

Many such cranes are in operation at dock frontages and have proved equally efficient in the matter of unloading sand, crushed rock and other materials, as well as coal.

The Hainesport Mining and Transportation Co., of Hainesport, N. J., is using a steam crane having a 75-foot radius of operation built for it by the Link Belt Co., of Philadelphia, which it uses for digging sand and gravel. This crane is equipped with a 5-cubic-yard grab-bucket, which has heavy manganese lips and teeth to take the wear. It digs 4,000 cubic yards in a 10-hour day regularly from a pit of 30-feet depth and dumps into a receiving hopper 22 feet below the crane and car tracks.

This particular crane, which is similar to many others, has a hoisting speed of 250 feet per minute and a travel speed of 150 feet per minute. Such a crane is provided with the means for laying the track upon which it runs, taking up the tracks behind its operation and laying them in front of its line of progress. The illustration of this crane shows it about to begin operations in an abandoned orchard, which has been cleared of the trees to permit of the sand digging operation to commence. Another view shows the result of the operation of the same crane in reclaiming sand. Cars are loaded beneath the receiving hopper; these are dumped into the scows which the company operates in the Delaware river for delivery at the market of Philadelphia and vicinity.

The Artesian Lime & Stone Co., Chicago, Ill., ments that confront the industry to make the result of the application of the locomotive crane the finishing improvement of the equipment of the modern commercial rock crushing plant.

Tri-State Quarries Are Busy.

Pittsburgh, Pa., May 19.—Stone men are all pretty busy getting out bridge stone and road material. Prices on bridge stone are rather low and competition is keen. Railroads are putting in much better inquiries for this grade of stone and the Pennsylvania quarries are beginning to get some good business as a result. The situation looks much better than a month ago. Tri-state quarries are working for the most part where they have not had any labor troubles and believe that there will be an even better business between now and fall.

The Ellwood City Stone Co. is working its quarries near Ellwood City, Pa., full time. Its chief product at present is bridge stone. The market for rubble stone this year is not very encouraging.

The Greer Lime Stone Co., of Morgantown, W. Va., of which H. C. Greer is president, will build a limestone crushing plant there. It has let the contract to the Hartley Engineering Co., of Morgantown, for its machinery.

The Juniatta Trap Rock Co. has been organized by W. G. Kenaga, L. M. Haggarty, George B. Piper and Isaac Chileote, of Huntingdon, Pa., to manufacture trap rock and quarry sandstone, limestone, lime and clay. It will also manufacture cement building blocks.

J. M. McGuire & Co. of this city have received the contract for a large quantity of road stone to be used on the roads of Allegheny county. Shipments are being made rapidly. The contract is one of the best awarded in this county for more than a year.

T. K. Morris is getting some nice contracts for road stone this spring and is fairly busy at his quarries in Beaver county. Prices are being cut considerably and business is still far from satsfactory.

General News of the Quarries

The National Stone Co., Louisville, Neb., will start operations within a few days.

The Van Court Stone Co., four miles east of Nehawka, Neb., will shortly resume operations, according to General Manager Johnson. On account of the large number of buildings being constructed in Omaha this season the rock business promises to be very good.

A new crushing plant is being installed in Stuart, Fla., at the Ojus quarry, which will have a capacity of over 1,000 cubic yards of crushed and screened rock daily. The rock is dredged out from under water and loaded on side dump cars, and later dumped into the crushers. The larger crusher is a Gates gyratory, weighing 68,000 pounds. The second crusher is a Champion jaw, weighing 20,000 pounds.

Pierce county's (Wash.) $100,000 rock quarry and rock crushing establishment at Electron, near Kapowsin, is to be abandoned and an attempt made to sell the machinery. The crusher has not been operated since 1913 because the plant could not be economically operated.

Supplementing the announcement made in the May 7 issue of ROCK PRODUCTS AND BUILDING MATERIALS, about $25,000 is to be expended in the construction of a big limestone crushing plant by the Greer Limestone Co., on the Morgantown & Kingwood railroad, where there are excellent ledges of high grade limestone. The Hartley Engineering Co., of Morgantown, W. Va., will install the machinery. H. C. Greer will be president of the new company. Possibly later the crushed limestone will be made into cement as a finished product of the plant. The plant will be ready for operations by the end of summer.

The Wheeling Mold & Foundry Co., Wheeling, W. Va., was awarded the contract for furnishing Ohio county (Pa.) with a new stone crusher.

In anticipation of landing the government contract for furnishing 200,000 tons of rock for Grays Harbor jetty work, the Hercules Sandstone Co., of Tenino, Wash., is already at work building an eight-mile railroad to open up a new quarry.

RECENT INCORPORATIONS.

The Black-Caywood Lime Co., Somerset, O.; capital stock, $1,000; to prepare limestone for agricultural and other purposes; G. Homer Gaywood, Samuel L. Black, J. Nelson Black, J. Edgar Butler, Reginald O. Dunhill and others.

Kings-West Co., Inc., Brooklyn, N. Y.; realty, construction, quarrying, etc.; capital, $25,000; incorporators: I. J. Feinberg, 423 Pennsylvania avenue; P. Aronson, B. Aronson, 619 St. Marks avenue, Brooklyn.

Cayuga Stone & Lime Co., Union Springs, N. Y.; capital, $40,000.

The Wabash Stone Co., St. Louis, Mo.; capital stock, $2,000, fully paid; will do a general stone and quarry business; John F. Elliott, Harry W. Elliott, Solomon Stone and Alex. Thom.

The Hillside Stone Co., Pittsburgh, Pa.; S. D. Foster, E. J. Lewis, D. A. Foster and A. B. Berger, of Pittsburgh; will make a specialty of bridge and stone work.

GYPSUM PRODUCTS

New Gypsum Deposit in Iowa

BY GEORGE F. KAY.

For many years Iowa has ranked among the important gypsum-producing States of the United States. The deposits from which all the output has come are in Webster county, in the vicinity of Fort Dodge, where an area comprising more than 40 square miles may be regarded as available for gypsum mining. The gypsum is confined to a single bed, which is practically horizontal and ranges in thickness from 10 to 25 feet. A mantle of drift 60 to 80 feet thick covers the gypsum except along Des Moines river and its tributaries. The deposit and the related rocks are probably of Permian age.

A new gypsum deposit was recently discovered in the southern part of the town of Centerville, Appanoose county, Iowa. For many years the Scandinavian Coal Co. has been operating a coal mine at Centerville. In the fall of 1910 this company decided to do some additional prospecting for coal on its property by means of the diamond drill. Accordingly, a contract was made with a Chicago firm for not less than 550 feet of drilling, either as separate holes or as one hole. Although the coal bed worked by the company lies only about 100 feet below the surface and although the base of the coal-bearing strata in this region, as shown by artesian-well records, lies considerably less than 550 feet below the surface, the company, nevertheless, directed the drillers to carry out the contract by continuing a hole to the depth of 550 feet. By means of this drilling gypsum was discovered below the coal-bearing rocks.

Geology of the Region.

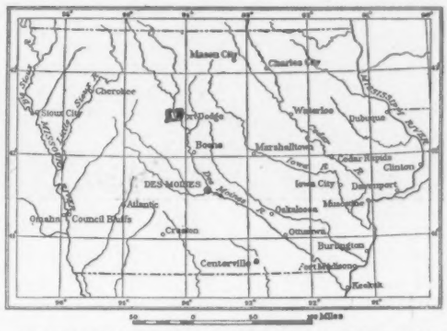
Kansan drift of variable thickness overlies the indurated rocks throughout Appanoose county, except in the deeper valleys, where the drift has been eroded and the underlying rocks have been exposed. The rocks just beneath the drift belong to the Des Moines group, of the Pennsylvania series. The upper part of the Des Moines contains the Mystic coal bed, which is one of the most persistent and extensively developed coal beds in Iowa. This coal and related bands of limestone of wide extent, some of which lie above the coal and some below, were designated by Bain the Appanoose formation, to distinguish them from the underlying, more typical shaley phase of the Des Moines of Iowa, the rocks of which are very irregular in thickness and in lithologic character and include several beds of coal that are in places thicker than the Mystic bed but are of moderate extent.

To the south of Appanoose county, in Putnam county, northern Missouri, the Pennsylvania rocks are similar to those of Appanoose county. In accordance with the classification of the Pennsylvanian series of the eastern part of Putnam county, recently published by the Missouri Geological Survey in coöperation with the United States Geological Survey, the indurated rocks of the Centerville region belong to the Henrietta formation and the Cherokee shale, the Mystic (Lexington) coal being in the Cherokee a few feet below the base or "cap rock limestone" (Fort Scott limestone member) of the Henrietta formation.

The rocks below the Pennsylvanian in Appanoose county are known only from drill records of artesian wells. At Centerville three deep wells have been sunk for water. The deepest of these wells and the one of which there is the most complete record gave a section as follows:

	Feet
Quaternary: Drift	90
Carboniferous:	
Pennsylvanian: Shales, coal and coaly shale, and a few thin seams of limestone	436
Mississipian: Chiefly limestone and shales	574
Devonian: Limestone and shales	260
Silurian: Limestones, shales and sandstones	180
Ordovician: Dolomites, limestones, sandstones and shales	955

The depth of this well was 2,495 feet. Its bottom penetrated the Oneota dolomite, or lowest formation of the Ordovician in Iowa. This well was sunk in 1893, and if the gypsum was penetrated it was not so recorded by the drillers. However, in this connection, it is of interest to state that the log of one of the other deep wells, completed in 1904, contains a statement to the effect that at a



INDEX MAP SHOWING LOCATION OF GYPSUM AREA AT CENTERVILLE, IOWA, AND ITS RELATION TO THE FORT DODGE DISTRICT.

depth of 600 feet below surface the drill passed through 15 feet of "white sand." From the evidence that has been obtained from the holes recently drilled, it is very probable that this material should have been recorded as gypsum. This well is more than half a mile northeast of the hole in which gypsum was first recognized.

The gypsum and anhydrite were penetrated between the depths of 537 feet and 547 feet below the surface. Analyses made under the direction of Dr. S. W. Beyer, Iowa State College, proved that the upper five feet of this 10 feet was anhydrite and the lower five feet gypsum. The gypsum was overlain by 14 feet of limestone and underlain by two to three feet of buff dolomitic limestone, beneath which was shale.

Development of the Property.

Soon after gypsum had been found in Discovery hole, some of the citizens of Centerville subscribed sufficient funds to drill two additional holes. One of these was located 1,200 feet southwest of Discovery hole, at a lower elevation. The drill penetrated to a depth of 563 feet, but found neither gypsum nor anhydrite. The Mississippian was pierced to a depth of 114 feet, the hole ending in shale, above which was two feet six inches of dolomite.

A third hole was then drilled about 1,700 feet northwest of Discovery hole. This hole gave a section upon which the following interpretation is placed:

	Feet
Quaternary: Drift	20
Carboniferous:	
Pennsylvanian: Gray, blue, and dark shale with seams of coal and limestone	456
Mississippian: Limestone, arenaceous limestone, some sandstone, and gypsum	116
	592

The gypsum was entered at 572 feet below the surface. It proved to be 19 feet thick and of fine quality. Just beneath the gypsum was gray sandy shale, which was penetrated for only one foot.

The Centerville Gypsum Co. was then formed, with a capitalization of $25,000, and decided to sink a shaft close to Discovery hole with the object of using it later for hoisting gypsum on a commercial scale. This shaft was started about July 1, 1912. The gypsum was reached about Sept. 1, 1913, and since that time the shaft has been sunk to the rock beneath the gypsum. The shaft is 16 by six feet and has three compartments. Gypsum, 13 feet in thickness, was reached at a depth of 533 feet. In the eastern part of the shaft the gypsum is free from anhydrite, but in the western part anhydrite is associated with the gypsum.

When the shaft reached a depth of 528 feet, only a few feet above the gypsum, progress was greatly hampered by large quantities of artesian water that entered it. Some water had come in nearer the surface, but it was easily handled. The artesian water, about 3,300 gallons an hour, comes from a porous limestone about four feet thick which lies on the gypsum. It rises to a height of about 300 feet. The problem of handling this water has not been solved. A large deep-well pump, capable of handling 8,000 gallons of water an hour, has been installed, and it is hoped that the water, though a great handicap to development, will not prove impossible to control. It is the purpose of the company, if it finds that the gypsum can be mined on a large scale, to erect a modern plant for the preparation of gypsum products such as are now being made at Fort Dodge.

Description of the Gypsum.

The gypsum that has been obtained from the two-inch drill cores and from the shaft is of two fairly distinct varieties, rock gypsum and selenite. The rock gypsum breaks into irregular-shaped lumps, is white in color, and is composed of small, brightly shining elongated crystals. It is saccharoidal and distinctly friable, being easily crumbled to fragments resembling a pure-white granulated sugar. Much of the selenite is very clear and transparent with the characteristic pinacoidal cleavage. It is possible to secure fairly large masses of selenite free from impurities. Some of the selenite is gray to light brown in color.

Under the direction of Dr. S. W. Beyer, of the Iowa State College, five analyses were made, two of the gypsum and three of the anhydrite.

Analyses of gypsum and anhydrite from Appanoose County, Iowa.

	Gypsum		Anhydrite		
	1	2	1	2	3
Sulphur trioxide (SO_3)	46.16	45.63	54.12	55.39	54.45
Lime (CaO)	33.17	32.76	40.39	40.17	39.19
Loss on ignition	20.13	20.75	6.02	6.06	5.12
	99.36	99.16	100.94	101.62	98.76

The discovery of a deposit of gypsum in the Mississippian rocks of southern Iowa is of scientific interest. Whether or not this gypsum will prove to be of economic importance has yet to be determined. The evidence indicates that the deposit may be extensive and the gypsum is of good quality.

* Reprinted from "Contributions to Economic Geology," published by the United States Geological Survey.

SAND and GRAVEL

Working Double Turn.

Pittsburgh, Pa., May 19.—Sand companies are busier than they have been for a long time. On the local rivers every boat and digger available is working. Many of the plants are working double turn. Deliveries are being made rapidly and as there is no shortage of cars it is very easy to get material out to the contractors on record-beating time. Dealers in general are buying about the usual amount and do not seem disposed to stock up any. Prices are being cut hard, for in spite of the increase in demand every sand company is going after business with a vengeance and its salesmen have orders to get the business if at all possible.

The Ohio River Sand Co. announces that the sand business is in better shape than for a long time. Its plant at Ambridge, Pa., on the Ohio river, is working double turn. The company is making good shipments of sand in carload lots, especially to the big mill district north of Pittsburgh.

The Iron City Sand Co. has moved its offices from the Fulton building, where it had been located several years, to the Bessemer building across the street, where it has larger and better quarters.

M. Bason, of Boony Brook, Lancaster county, Pa., has leased the plant of the Holly Sand Co. near Barnitz, Pa., and will take personal charge of it at once.

SAND PILES FOR CHILDREN.

Sand piles for children's play yards are being advocated by the Kansas City Sand Co., Kansas City, Mo., and in an attempt to make a complete success of the campaign now under way the Boy Scouts of Kansas City have been made salesmen of the company. Practically all of the boys want to attend the big camp of the scouts at Elks Springs, near Kansas City, this summer, and for the sale of 16 piles of sand the boys will have enough money for the camp. In commenting upon this feature of the sand company Mr. Caffery says, "Every boy scout who has enough sand in his makeup and is gritty enough to get out and sell it is getting in with the Kansas City Sand Co."

PUMPING SAND FROM MISSOURI RIVER.

The Stewart-Peck Sand Co. is said to be the only concern pumping sand from the Missouri river close to the port of Kansas City. For this work

STEWART-PECK SAND BOAT IN MISSOURI RIVER.

the company is equipped with a number of boats which secure the sand from the river bed by means of hydraulic pumps.

The operation is continuous from early morn until late at night and the material is hauled to the wharf in barges.

Notes of Ohio Sand Concerns.

Toledo, Ohio, May 19.—Sand companies of Ohio are again complaining to the State Utilities Commission because the railroads entering Toledo and Sandusky have discontinued the allowance of eight cents a ton for loading sand. Among the plaintiffs are the Doville Sand & Gravel Co., The Toledo Builders' Supply Co., The Citizens' Sand & Gravel Co., The Holt Builders' Supply Co. and the Acme Clay & Builders' Supply Co.

The plant of the Central Sand Works, at Rockbridge, Ohio, which was established about a year ago, was burned two weeks ago. It employed about 15 people.

The Marietta Sand Co., of Marietta, Ohio, is arranging to build a single railroad track on Butler street in that town from Front street to Muskingum street in order to extend its operations largely.

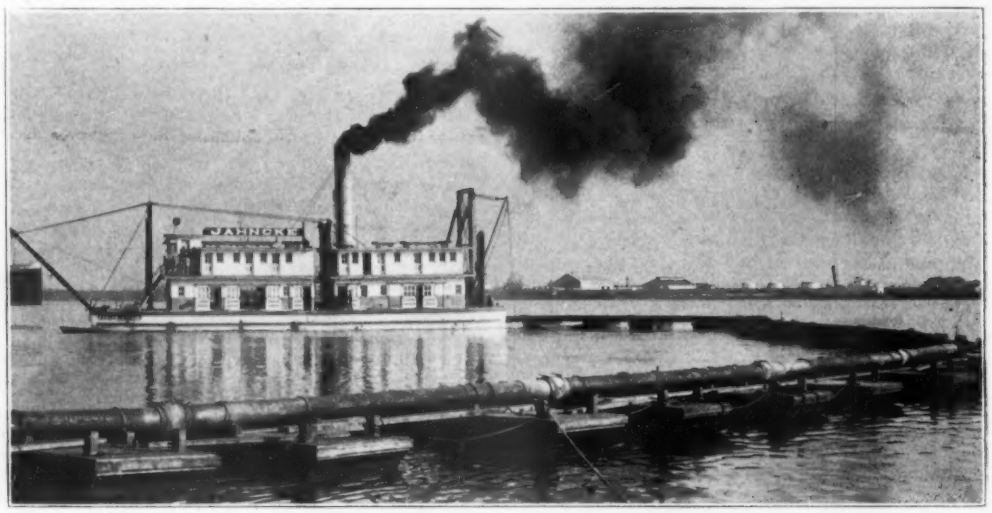
SEEK TO RECOVER STOCK.

Louisville, Ky., May 19.—Frank L. Barth, Paul C. Barth and Albert T. Barth, sons and heirs of the estate of Paul C. Barth, former mayor of Louisville, recently filed a petition in circuit court in the form of an answer, cross-petition and counter-claim, seeking to have set aside and held as naught the sale of 15 shares of the capital stock of the Ohio River Sand Co., which was made by the executors of the will, the Fidelity & Columbia Trust Co., on September 18, 1907, to John M. Settle and Charles H. Bohmer. The petitioners ask for an accounting for all profits on the stock since its reported sale, and say that if the sale is held by the court to be valid the applicants be awarded a judgment for $100,204 against the trust company as executor of the estate of their father. It is alleged that the net earnings of the stock have been in excess of $12,500 a year, but that the entire 15 shares were sold by the trust company for $27,500 within a few days of the death of their father and without the executor having made any examination of the value of the property.

Pontoons Aid in Reclaiming Sand.

Practically all the sand and gravel that is used in the New Orleans market is reclaimed by the dredging and washing process. The accompanying picture shows the sand boat "Jahncke" at work in the New Orleans harbor, illustrating the pipe line supported on pontoons through which the material is delivered to the storage docks for delivery by wagon throughout the city.

It is part of the equipment of Fritz Jahncke, Inc., the well known dealers in builders' supplies and building specialties. The crew on this boat make their permanent home aboard the craft, and she works her big centrifugal pump day and night, and experience has proved that outfits of this character are the most economical for the reclamation of sand at the mouth of the Mississippi river.



SAND DREDGING IN THE MOUTH OF THE MISSISSIPPI RIVER.

The view thus illustrated is a familiar one to those who have sailed into the harbor of New Orleans.

WABASH VALLEY PLANTS.

Terre Haute, Ind., May 19.—Prospects for business in the Wabash valley are considered good for summer, although orders appear a little slack at this time of year, which is not unusual. Prices have been increased to some extent on concrete road material, owing to the rigid specifications and inspection. The Wabash Sand & Gravel Co., of this city, reports prospects good, especially in highway construction. The Vigo Sand & Gravel Co. is not runnings its plant on the river this year. The Universal Sand & Gravel Co., at Covington, Ind., will soon have its new washing plant ready to operate. The Silverwood Sand & Gravel Co., of Mattoon, Ill., has rebuilt its plant and is now in operation again. The five per cent increase in freight rates in Indiana has not been allowed and prospects are that last year's rates will be used for some time.

The Rapids Gravel Co., Geo. J. Force, president and manager, Alexandria, La., will erect addition to gravel plant at Woodworth, La., to provide a capacity of from 20 to 40 cars daily.

SAND-LIME BRICK

The 1914 Sand-Lime Brick Production

The number of active sand-lime brick operators reporting decreased as compared with 1913, and one state that reported business in 1913 dropped from the list of producers. In 1914 the value of the output was $1,058,512. Compared with 1913, this was a decrease of $179,813, or 14.52 per cent; compared with 1912, it was a decrease of $141,711, or 11.81 per cent; but compared with 1911, it was an increase of $160,848, or 17.92 per cent. The average value of output per active plant in 1914 was $17,073; in 1913 it was $18,211; and in 1911 it was $13,601. Nine of the 23 states reporting marketed product in 1914 showed increase and 14 showed decrease. These increases and decreases were confined to no one section of the country. Florida, Indiana, South Dakota and Wisconsin showed the principal increases; California, District of Columbia, Massachusetts, Michigan, New York, Pennsylvania, Texas and Washington showed the largest decreases.

The following table shows the production of sand-lime brick in the United States from 1903 to 1914, inclusive:

Value of production of sand-lime brick in the United States, 1903-1914.

Year.	Number of active firms reporting.	Value of product.	Year	Number of active firms reporting.	Value of product.
1903	18	$155,040	1909	74	$1,150,360
1904	27	665,120	1910	78	1,169,153
1905	64	972,064	1911	66	897,664
1906	67	1,170,005	1912	71	1,200,223
1907	94	1,225,709	1913	62	1,238,325
1908	67	1,029,660	1914	62	1,058,512

This table shows that the value of sand-lime brick marketed and the number of active plants reporting rose rapidly until 1907. In 1908 there was a decrease, in common with other industries. In 1909 and 1910 there were slight increases. In 1911 the lowest value ($897,664) was reached since 1904, when the industry first became well established. In 1912 and 1913 there were gains in value, the total for 1913 being the maximum; but in 1914 there was a decrease, the value of the product in that year being the lowest since 1908 except in 1911. The number (62) of active firms reporting in 1914 was the smallest since 1904.

The domestic production of sand-lime brick in 1914 by states and kinds is shown in the following tables:

Production of sand-lime brick in the United States in 1914, by States and kinds.

State.	Number of active firms reporting.	Common brick.[a] Quantity (thousands).	Common brick.[a] Value.
California	4	1,494	$15,367
Florida	6	15,476	105,435
Idaho	3	1,670	17,466
Indiana	4	16,398	95,175
Massachusetts	4	2,580	28,713
Michigan	12	62,465	256,784
Minnesota	4	19,958	119,271
New York	4	18,547	107,623
Pennsylvania	3	9,960	54,618
South Dakota	2	3,864	27,055
Wisconsin	4	14,696	86,952
Other States[b]	13	[c]21,998	[c]163,953
Total	62	172,629	1,058,512

[a] Includes 7,630,000 front brick, valued at $69,253, made in the following States: California (985,000, valued at $9,105), District of Columbia, Florida (1,267,000, valued at $11,115), Idaho, Indiana, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, Oklahoma, South Dakota, and Wisconsin.
[b] Includes Colorado, District of Columbia, Georgia, Iowa, Kentucky, Nebraska, New Jersey, North Dakota, Ohio, Oklahoma, Texas, and Washington.
[c] Includes fancy brick.

This table shows that the value of the output in 1914 decreased $179,813, or 14.52 per cent. The number of states in which production was reported in 1914 was 23, a decrease of 1 from 1913 (Kansas). Michigan continues to be the leading state, the value of its product constituting 24.16 per cent of the total value of all sand-lime brick in 1914, and 25.94 per cent of the total in 1913. Minnesota was second in 1914, reporting 11.27 per cent of the total; it displaced New York, which was third with 10.17 per cent of the total value.

Of the states for which totals are given, six—California, Massachusetts, Michigan, Minnesota, New York and Pennsylvania—showed decrease in 1914, and five—Florida, Idaho, Indiana, South Dakota and Wisconsin—showed increase. The greatest decrease was in Michigan, $65,461, and the greatest increase was in Florida, $25,756.

Michigan had the largest number (12) of active firms reporting in 1914, the same number as in 1913. California and New York, which each had five active firms reporting in 1913, had only four in 1914. Florida, Indiana, Massachusetts, Minnesota and Wisconsin also had four producers each in 1914. No other state had as many as four producers in that year.

The average price per thousand for common sand-lime brick was $5.99 in 1914, as compared with $6.27 in 1913, $6.46 in 1912, and $6.09 in 1911. For front brick the average price was $9.08 in 1914, $10.61 in 1913, $10.41 in 1912 and $9.53 in 1911. In 1914 common brick represented 93.38 per cent of the value of all products and front and fancy brick 6.62 per cent. In 1913 common brick represented 90.32 per cent of the value of all products and front and fancy brick 9.68 per cent.

Eastern Pennsylvania Dealers Get Together.

(Continued from page 22.)

having a good time. There was a dinner of considerable merit, which was followed by a moving picture show entitled "A Concrete Romance," in which the advantages of using concrete were vividly set forth in the acquisition of higher values for dilapidated farms and a bride by the efficiency concrete engineer brought onto the job by a prosperous "Pop." This was preceded by story telling and a general review of the advantages of the extended use of concrete by William A. McIntyre, of the Association of American Portland Cement Manufacturers, Philadelphia. He spoke on the value of reinforced concrete as a fireproofing material, as demonstrated by a damage of only 12 per cent in the Edison fire last December, one of the hottest ever reported in fire underwriting annals. He said that the progress of cement used had developed first from building construction, then in agriculture and, in the present day, in road construction. He urged the dealers to try to have cement roads specified and constructed according to the most approved methods so as to insure permanency. He said that 3,200 barrels of cement were required for a mile of road built according to approved specification, and that when concrete roads were built right they were permanent.

A very fine vaudeville performance followed the lecture and at 5 o'clock the delegates disbanded.

ASSOCIATION MEMBERS.

Some idea of the way the Building Material Dealers' Association of Eastern Pennsylvania has grown during the short time since it was organized may be gathered from the roster as compiled by Secretary Charles H. Cox. The asterisk before the name indicates that the firm was represented at the Philadelphia get-together meeting on May 11.

Active Members.

*E. Y. Barnes, Yardley.
*O. N. Bleir, Tuscanova.
*J. C. Budding, Lancaster.
*Irwin Burnell, Pleasant Mount.
*L. L. Brackhill, Strassburg.
*W. T. Bradley Co., Philadelphia.
Bowden & Northrup, Ashley.
*J. W. Bishop, Sayre.
*Charles H. Cox & Brother, Phoenixville.
*J. Watson Craft, Ambler.
*Martin F. Connor, Philadelphia.
*Walter J. Crowder, Philadelphia.
Chester Lumber & Coal Co., Chester.
*J. B. Cranston (non-member), Cynwyd.
*Charles H. Dunkelberger, Kulpmont.
*DeFrain Sand Co., Philadelphia.
*George F. Erich, Allentown.
*P. H. Fairlamb Co., Philadelphia.
*Samuel H. French & Co., Philadelphia.
J. Fegley & Son, Pottstown.
*P. H. Fairbank Co., Philadelphia.
*Fred W. Frantz, Kingston.
*S. Y. Fredericks & Son, Hazelton.
Harry W. Gilbert, Philadelphia.
*D. C. Geiger, Reading.
*J. M. Gring Co., Reading.
J. H. Griffith, Nesquehoning.
Moses Griffith, Plains.
*N. H. Grove & Son, Philadelphia.
*Joseph C. Gerbron, Cheltenham.
*J. N. Henricks, Pottstown.
William Hobensack, Ivyland.
Charles Huston & Co., Three Springs.
Hitesherr & Co., Chambersburg.
*F. Hersh Hardware Co., Allentown.
*C. B. Hoyt, Wilkes-Barre.
*Estate of Rufus Hooper, Lansdowne.
*Ralston R. Hooper (non-member), Westchester.
M. Kelley's Sons, Philadelphia.
*Krupp, Meyer & Hoffman, Lansdale.
*Luther Keller, Scranton.
*M. A. Kuden, Allentown.
*Knickerbocker Lime Co., Philadelphia.
*D. H. Lesher & Son, Welsport.
J. H. Long, Strasburg.
J. F. Lutz, Stevens.
J. H. Long Hardware Co., Oswigsburg.
*J. H. Leister & Son, North Wales.
*E. L. Merriman (Paragon Plaster & Supply Co.), Scranton.
*Maloney Oil & Manufacturing Co., Scranton.
E. H. Martin, New Holland.
*L. W. Mattern, West Point.
*J. G. Moyer & Sons Co., Perkasie.
Frank W. Miller, Bloomsbury.
*Louis Miller, Pottsville.
*D. H. Miller & Son, Reading.
*W. S. McDowell, Chester.
A. R. Nicholson, Wyncote.
C. Ober, Middleton.
*Joseph H. Palmer, Wallingford.
*Henry Palmer, Langhorne.
*Robert Patterson & Son, Philadelphia.
Petty Bros., Lebanon.
Edward H. Pusey, Wilmington.
*Morris P. Penrose, Phoenixville.
*Peoples Brothers, Philadelphia.
*Reitz & Snyder, Palmerton.
*H. L. Rockefeller, Sunbury.
*ROCK PRODUCTS AND BUILDING MATERIALS, Chicago.
A. L. Roth Co., Reading.
Jesse L. Ross & Co., Waynesburg.
D. R. Reshel, Ottawa.
*E. J. Romig, Quakertown.
Ross Rhoads, Harrisburg.
*H. W. Ruggles, Luzerne.
Roberts Lumber & Realty Co., Peckville.
George A. Sinn, Frankford.
*C. F. Shultz (non-member), Philadelphia.
W. A. Schuler, Wilkes-Barre.
*Scheele Bros., Girardville.
*W. N. Snyder & Son, Tower City.
C. E. Seldonridge, Ephrata.
*H. E. Strathman Co., Philadelphia.
*A. S. Tyson, Lansdale.
*Jacob L. Tyson, Philadelphia.
*L. H. Texter, Hatfield.
*Edward L. Taylor, Fern Rock.
C. F. Williamson, Media.
*W. L. White (Runyon P. & S. Co.), Bloomsburg.
Jesse G. Woodring, Hazelton.
*Werner Brothers, York.
George A. Wolf, Mount Wolf.
*J. M. Yeager, Yeagertown.

Associate Members.

*Allentown Portland Cement Co., Allentown.
*Coplay Cement Manufacturing Co., Philadelphia.
Edison Portland Cement Co., Philadelphia.
*William G. Hartranft Cement Co., Philadelphia.
*Giant Portland Cement Co., Philadelphia.
*M. H. Horn, Catasauqua.
*J. B. King Co., Philadelphia.
*Kingston Plaster Co., Philadelphia.
*Lehigh Portland Cement Co., Allentown.
*Nazareth Portland Cement Co., Nazareth.
*Security Lime & Cement Co., Hagerstown.
*Charles W. Warner Co., Philadelphia.
*Paragon Plaster Co., Bloomsbury.
*Philadelphia Slag Co., Philadelphia.
*Merion Lime & Stone Co., Norristown.
*National Fireproofing Co., Philadelphia.

CASES ON I. C. C. DOCKET.

On the docket of the Interstate Commerce Commission set for hearing at Chicago, El Paso, Tex., and Denver, Col., are the following cases of interest to the building material industry:

June 9—Chicago, Ill.—Examiner Marshall:
Case No. 7234—Grand Rapids Plaster Co. vs. Ann Arbor R. R. Co. et al.
Case No. 7404—American Cement Plaster Co. vs. L. S. & M. S. et al.
Case No. 7421—Bestwall Mfg. Co. vs. L. S. & M. S. Co. et al.
June 11—El Paso, Tex.—Examiner Mackley:
Case No. 7751—Southwestern Portland Cement Co. vs. Tex. & Pac. et al.
Case No. 7327—U. S. Gypsum Co. vs. L. S. & M. S. et al.
Case No. 7287—U. S. Gypsum Co. vs. B. R. & P. Ry. Co. et al.
Case No. 7436—Niagara Gypsum Co. vs. B. R. & P. Ry. Co. et al.
June 11—Denver, Colo.—Examiner La Roe:
Case No. 7629—Colorado Portland Cement Co. vs. A., T. & S. F. Ry Co. et al.

CLAY PRODUCTS

Clay Exhibits at Panama-Pacific Exposition.

San Francisco, Cal., May 18.—The Denison Block Co., of Sacramento, Cal., has put in a large exhibit in Machinery Palace at the Panama-Pacific Exposition. For a distance of 40 feet and to a height of 10 feet the wall of the company's booth is lined with terra cotta. The exhibit shows plain tile, plaster, cement brick and face brick.

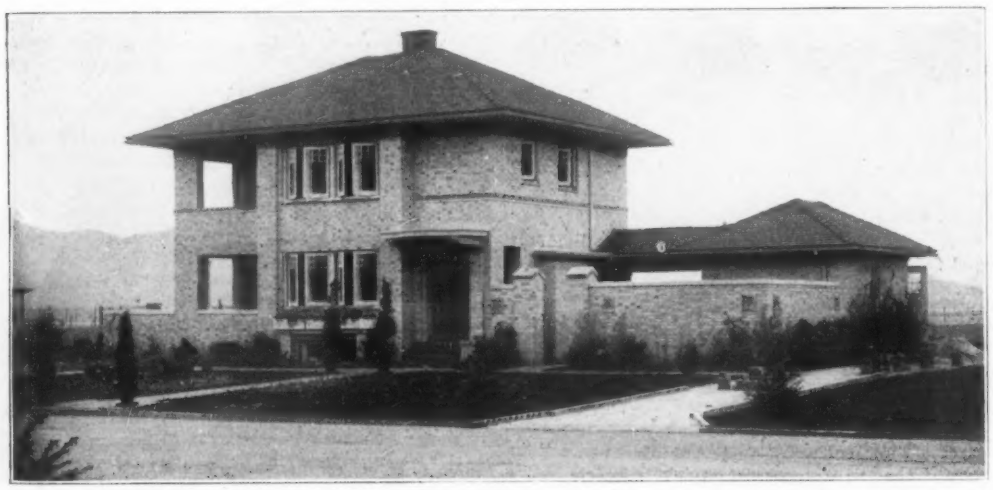
Displays of fireproofing hollow tile, sand-lime brick and artificial building stone are shown in the Uruguay section of the Liberal Arts Palace. The latter exhibit is from the works of the Compania de Material de Construcion, Montevideo. There is also a good display of brick, tile and other clay products from the Brick Works, Ltd., Geldermaken, Holland, in the Netherlands section of the Liberal Arts Palace.

In the Mines building are shown California fire brick made at Livermore, Cal., and some nice samples of front brick by the L. A. Pressed Brick Co. The United Materials Co., of San Francisco, has a display of common brick. China has a little exhibit in the Mines building of some of its brick and pottery products, of which additional information will be published later.

There is a display in the Varied Industries building of the L. A. Pressed Brick Co. of glazed and face brick.

Model Brick Residence.

Within the grounds of the exposition, among the buildings that are dedicated to the various states of the Union, and occupying the space that was originally set apart for Colorado, stands a typical American residence. "Typical" is a particularly apt word, in this instance, since this building typifies several important movements.



BRICK BUNGALOW AND GARAGE AT PANAMA-PACIFIC EXPOSITION.

The first is the home-building movement, which has its place in the heart of every American man and woman.

The second is the movement for a fire-resistant residence construction, which follows the educational work done by so many of the national magazines and by the daily newspapers.

The residence is typical in design. It follows no set style, but shows, instead, a careful study of the many styles that have made American residence architecture grow in beauty with each decade.

It is typical of the American family of moderate income. The cost of erection, in half a hundred different American cities, has been estimated. It is said to be in the neighborhood of $5,000, which, on a lot costing $1,000, would give a rental value of $50 a month.

The house was erected by a small group of men interested in the manufacture and sale of face building brick, with the added assistance of some of the men who make common building brick and other burned clay products that enter into building construction. These men have organized themselves into the Panama-Pacific Clay Products Association, with Herman L. Matz, of Chicago, as president.

The house will be open to inspection during the entire time of the exposition.

Missouri's Clay Exhibits.

In the northeast corner of the Mines building is an extremely interesting exhibit showing the mineral resources of Missouri, of which Otto Ruhl, mining engineer, of Joplin, Mo., is in charge. This is a very comprehensive display of the state's mineral products and what is made from these products in a commercial way. It also shows Missouri's clays, building stones and a great variety of building materials, being a collective exhibit of which the leading concerns of the state are exhibiting.

On the north wall is a unique American flag in natural colors made from glazed and unglazed roofing tile, the flag measuring approximately eight by 14 feet. The tiles in this flag were made by the Mound City Roofing Tile Co., St. Louis. The flag pole is represented by a pyramid of various sizes of sewer pipe furnished by the Blackmer & Post Co., and the Evans-Howard people, of that city. There is also a complete display of the Laclede-Christy Co., also of St. Louis, showing a complete line of fire clay and every brand of fire brick with special furnace forms, blocks, etc.

The Hydraulic Pressed Brick Co., St. Louis, has a complete line of brick in panels, while the Poplar Bluff Brick Co. and the Deerfield Brick Co. show a representative sample of their standard red brick. The latter concern is also exhibiting a large number of tile and silo brick forms. The Fulton Brick Co. has a line of fire brick and clays.

In addition to the sewer tile and pipe in the flag pole mentioned above, both the Blackmer & Post and the Evans-Howard companies have a complete line on display, together with some interesting sections representing a tree trunk with branches. These are used in gardens for the display of flowers and plants.

CHAPTER FIVE

The first hastily constructed imitations of Pierce-Arrow worm-gear drive appeared on the market in 1913, and in 1914 a number of leading manufacturers adopted the worm gear for their entire line of trucks. Service records of Pierce-Arrow trucks had shown by this time that there was no perceptible wear in the worm gear after running over 100,000 miles. More and more repeat orders were received as a result of the favorable showing made by these pioneer worm-gear trucks.

CHAPTER SIX

The trend now became increasingly strong toward worm-gear drive. A general review of the motor truck shows of 1915 indicated that out of 213 accredited makers of gasolene commercial vehicles 25% were already using worm gear while many more were preparing to adopt it next year. Nearly 2,000 Pierce-Arrow worm-gear trucks in successful operation throughout the country now bear witness to the correctness of Pierce-Arrow design and constructions.

(To be continued in 1916)

Pioneers in Worm-Gear Drive

Prospective purchasers will find in this little sketch of recent motor truck history about as strong an argument as we can offer in favor of the Pierce-Arrow truck. If recent developments have convinced you that the worm gear is the most efficient and economical drive for motor trucks, it will surely be wise to purchase a truck which has long since passed the experimental stage and now embodies the results of four and one-half years actual working experience in many different kinds of service. Such a motor truck is the Pierce-Arrow—built by the pioneers in worm-gear drive in this country. We shall be glad to send to anyone interested a catalogue of Motor Trucks showing numerous body-types for 2-ton and 5-ton chassis.

The Worm-Gear

Pierce-Arrow Motor Car Co.

BUFFALO, N. Y.

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Urschel Bates Valve Bag Co.

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Chain Belt Co.
Dull & Co., R. W.
Goodrich Co., B. F.
Imperial Belting Co.
Link Belt Co.
Revere Rubber Co.
Stephens-Adamson Mfg. Co.
Webster Mfg. Company.
Weller Mfg. Co.

BRICK.
Belden Brick Co.
Metropolitan Paving Brick Co.

BRICK CLAMPS.
The P. D. Crane Co.

BRICK PAVING.
Harris Brick Co.
Metropolitan Paving Brick Co.
Thornton Fire Brick Co.

BUCKETS, DUMPING AND GRAB.
Atlas Car & Mfg. Co.
H. W. Caldwell & Co.
Haiss Mfg. Co., Inc., Geo.
Hendrick Mfg. Co.
Link Belt Co.
McMyler-Interstate Co.
Standard Bucket Co.
Willis Shaw Mchy. Co.

CABLES.
American Steel & Wire Co.
Dull & Co., R. W.
Sauerman Bros.

CALCINING MACHINERY.
Atlas Car & Mfg. Co.

CARS, INDUSTRIAL.
Atlas Car & Mfg. Co.
Austin Mfg. Co.
Haiss Mfg. Co., Inc., Geo.
Kilbourne & Jacobs Mfg. Co.
Link Belt Co.
Stephens-Adamson Mfg. Co.
Weller Mfg. Co.

CASTINGS.
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CEMENT, PORTLAND.
Alpha Port. Cement Co.
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Chicago Portland Cement Co.
Clinchfield Portland Cement Corp.
Copiay Cement Mfg. Co.
Huron-Wyandotte Port. Cement Co.
Kansas City Portland Cement Co.
Lehigh Portland Cement Co.
Marquette Cement Mfg. Co.
Northwestern States Portland Cement Co.
Ohio & Western Lime Co.
Phoenix Portland Cement Co.
Sandusky Portland Cement Co.
St. Louis Portland Cement Works.
Union Sand & Material Co.
Whitehall Portland Cement Mfg. Co.
Wolverine Portland Cement Co.
Woodville Lime & Cement Co., The.

CHAINS.
Chain Belt Co.
Columbus Chain Co., The.
Jeffrey Mfg. Co.
Link Belt Co.

CLAYWORKING MCHY.
American Clay Mchy. Co.
Bartlett, C. O., & Snow Co.

COAL CHUTES.
Kewanee Mfg. Co.

COLORINGS DRY AND MORTAR.
Samuel Cabot.
Chattanooga Paint Co.
Clinton Metallic Paint Co.
Macneal, James B., & Co.
Ricketson Mineral Paint Works.
Williams, C. K., & Co.
Woodville Lime & Cement Co.

COMPRESSORS.
Allis-Chalmers Mfg. Co.
Clayton Air Compressor Co.

CONCRETE MIXERS.
Chain Belt Co.
Cement Tile Mach. Co.
Jaeger Mach. Co.
Miscampbell, H.
Power & Mining Mach. Co.

CONCRETE REINFORCEMENT.
American Steel & Wire Co.

CONSULTING GEOLOGISTS.
Grimsley, G. P., Ph. D.
Hunt, Robt. W., & Co.

CORNER BEADS.
Bostwick Steel Lath Co., The.
Canton Metal Ceiling Co., The.
North Western Expanded Metal Co.
Sykes Metal Lath & Roofing Co.

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Cleveland Ry. Supply Co.
Link Belt Co.
McMyler-Interstate Co.

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Weller Mfg. Co.

CRUSHED STONE.
A. & C. Stone & Lime Co.

CRUSHERS AND PULVERIZERS.
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Austin Mfg. Co.
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Bonnot Co., The.
Bradley Pulverizer Co.
Butterworth & Lowe.
Chalmers & Williams.
Ehrsam, J. B., & Sons Mfg. Co.
Jeffrey Manufacturing Co.
K.-B. Pulverizer Co.
Kent Mill Co.
Lewistown Foundry & Machine Co.
McLanahan Stone Machine Co.
Pennsylvania Crusher Co.
Power & Mining Mach. Co.
Raymond Impact Pulverizer Co.
Sturtevant Mill Co.
Traylor Eng. & Mfg. Co.
Webb City & Carterville F. & M. Wks.
Williams Pat. Crusher & Pulverizer Co.

DRAIN TILE.
American Clay Co.
Vigo-American Clay Co.

DRILLS.
Loomis Machine Co.

DRYERS.
American Process Co.
Bartlett, C. O., & Snow Co.
Link Belt Co.
Ruggles-Coles Eng. Co.

ENGINEERS.
American Process Co.
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Buckbee Co., J. C.
Duff Patents Co., Inc.
Dull, Raymond W., & Co.
Fuller Engineering Co.
Grimsley, G. P.
Hunt, Robt. W., & Co.
Improved Equipment Co.
Meade, R. K.
Sauerman Bros.
Schaffer Eng. & Equip. Co.
Smidth & Co., F. L.
Stephens-Adamson Mfg. Co.
Traylor Eng. & Mfg. Co.
Yates, P. K.

ENGINES.
Allis-Chalmers Mfg. Co.
Power & Mining Mach. Co.

EXCAVATORS.
Buckbee Co., J. C.
Raymond W. Dull Co.
Haiss Mfg. Co., Inc., Geo.
Indianapolis Cable Excavator Co.
McMyler-Interstate Co.
Sauerman Bros.
Weller Mfg. Co.

FIRE BRICK.
Carolina Portland Cement Co.
Improved Equipment Co.
Thornton Fire Brick Co.

FLOOR HARDENER.
Ceresit Waterproofing Co.

FURNACES FOR SPECIAL PURPOSES.
Improved Equipment Co.

GAS PRODUCERS.
Improved Equipment Co.

GATES.
Haiss Mfg. Co., Inc., Geo.

GEARS.
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Chain Belt Co.
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Stephens-Adamson Mfg. Co.
Weller Mfg. Co.

GLASS SAND MACHINERY.
Lewiston Fdy. & Mach. Co.

GYPSUM BLOCK.
American Cement Plaster Co.
U. S. Gypsum Co.
Plymouth Gypsum Co.

GYPSUM—PLASTER.
American Cement Plaster Co.
Best Bros. Keene's Cement Co.
Cardiff Gypsum Co.
Carolina Portland Cement Co.
National Mortar & Supply Co.
Ohio & Western Lime Co.
Plymouth Gypsum Co.
U. S. Gypsum Co.
Wheeling Wall Plaster Co.

HAIR.
Ohio & Western Lime Co.

HOISTS, ELECTRIC AND STEAM.
Allis-Chalmers Mfg. Co.
Buckbee Co., J. C.
Link Belt Co.
Haiss Mfg. Co., Inc., Geo.

HOLLOW CLAY TILE.
American Clay Co.
Metropolitan Paving Brick Co.
Vigo-American Clay Co.

HYDRATING MCHY.
Atlas Car & Mfg. Co.
Kritzer Co., The.
Miscampbell, H.

LIME.
Carolina P. C. Co.
Hannibal Lime Co.
Kelley Island Lime & Trans. Co.
Mitchell Lime Co.
National Lime & Stone Co.
National Mortar & Supply Co.
Ohio & Western Lime Co., The.
Owens & Son, John D.
Scioto Lime & Stone Co.
Woodville Lime & Cement Co.

LIME, HYDRATED.
Hannibal Lime Co.
Kelley Island Lime & Transport Co.
Mitchell Lime Co.
National Lime & Stone Co.
National Mortar & Supply Co.
Ohio & Western Lime Co., The.
Owens & Son, John D.
Scioto Lime & Stone Co.
Woodville Lime & Cement Co., The.

LIME KILNS.
Atlas Car & Mfg. Co.
Improved Equipment Co.

LOADERS AND UNLOADERS.
Ambursen Company.
Chain Belt Co.
Haiss Mfg. Co., Inc., Geo.
Jeffrey Mfg. Co.
Link Belt Co.
Manierre Eng. & Mach. Co.
Stephens-Adamson Mfg. Co.
Weller Mfg. Co.

LOCOMOTIVES.
Davenport Locomotive Wks.
Willis Shaw Mchy. Co.

MANGANESE STEEL.
Allis-Chalmers Mfg. Co.
Link Belt Co.
Taylor-Wharton Iron & Steel Co.

METAL LATH.
Bostwick Steel Lath Co.
Carolina Portland Cement Co.
North Western Expanded Metal Co.
Sykes Metal Lath & Roofing Co.
Trussed Concrete Steel Co.

MOTOR TRUCKS.
Kissel Motor Car Co.
Pierce-Arrow Motor Car Co.

PAINT AND COATINGS.
Cabot, Samuel.
Canfield Oil Co.
Ceresit Waterproofing Co.
Chattanooga Paint Co.
Gordon-Hitti Co.
Macneal, James B., & Co.
Ricketson Mineral Paint Co.
Williams, C. K., & Co.

PEBBLES.
Canada Pebble Co.

PERFORATED METALS.
Allis-Chalmers Mfg. Co.
Johnson & Chapman.
Hendrick Mfg. Co.
Toepfer, W., & Son.

PLASTER.
See Gypsum.

PLASTER BOARD.
American Cement Plaster Co.
Plymouth Gypsum Co.
U. S. Gypsum Co.

PLASTER BOND.
Ceresit Waterproofing Co.

PLASTER MCHY.
Butterworth & Lowe.
Dunning, W. D.
Ehrsam, J. B., & Sons Mfg. Co.
Miscampbell, H.
Williams Pat. Crusher & Pulverizer Co.

PREPARED ROOFING—SHINGLES.
Carolina Portland Cement Co.
Reynolds Asphalt Shingle Co.

PUMPS.
Allis-Chalmers Mfg. Co.
International Steam Pump Co.

QUARRY CARS.
See Cars.

ROAD MACHINERY.
Austin Mfg. Co.
Troy Wagon Works.

ROOFING-METAL.
Sykes Metal Lath & Roofing Co.

SAND.
Union Sand & Material Co.

SAND AND GRAVEL WASHING PLANTS.
Dull & Co., Raymond W.
Link Belt Co.
Stephens-Adamson Mfg. Co.
Webster Mfg. Co.
Weller Mfg. Co.

SAND LIME BRICK MACHINERY.
Amer. Clay Machy. Co.

SCALE CARS.
Atlas Car & Mfg. Co.

SCREENS.
Allis-Chalmers Mfg. Co.
American Pulverizer Co.
Butterworth & Lowe.
Chain Belt Co.
Dull & Co., Raymond W.
Ehrsam, J. B., & Sons Mfg. Co.
Haiss Mfg. Co., Inc., Geo.
Hendricks Mfg. Co.
Johnston & Chapman Co.
Link Belt Co.
McLanahan Stone Machine Co.
Power & Mining Mach. Co.
Stephens-Adamson Mfg. Co.
Sturtevant Mill Co.
Toepfer, W., & Sons.
Webster Mfg. Company.
Weller Mfg. Co.

SECOND-HAND MACHINERY.
Bourse.
Dolese & Shepard Co.
Grimshaw Co., Wm. B.
Shaw Mach. Co., Willis.

SEWER PIPE.
Houston Bros. Co.
Plymouth Clay Products Co.

SHEAVES, BLOCKS AND VALVES.
Haiss Mfg. Co., Inc., Geo.

SINK AND FLOAT TESTERS.
Pennsylvania Crusher Co.

SPREADERS, ROAD.
Troy Wagon Wks. Co., The.

STEAM SHOVELS.
Marion-Osgood Co.
Thew Automatic Shovel Co.
Shaw Mchy. Co., Willis.

STUCCO RETARDER.
National Retarder Co.

TRAILERS, TRACTORS AND MOTOR TRUCKS.
Troy Wagon Wks. Co., The.

TRAMWAYS.
Ambursen Company.
American Steel & Wire Co.
Link Belt Co.

TRUCK AND WHEELBARROWS.
Kilbourne & Jacobs Mfg. Co.

TUBE MILLS.
Allis-Chalmers Manufacturing Co.
Power & Mining Mach. Co.
Smidth & Co., F. L.

WAGONS—DUMP AND REVERSIBLE.
Troy Wagon Wks. Co., The.

WALL PLUGS AND TIES.
Bostwick Steel Lath Co.
Canton Metal Ceiling Co., The.
Sykes Metal Lath & Roofing Co.

WATERPROOFING.
Cabot, Samuel, Inc.
Canfield Oil Co.
Carolina Portland Cement Co.
Ceresit Waterproofing Co.
Hercules Waterproofing Cement Co.
Sandusky Portland Cement Co.

WEIGHING MACHINES.
Automatic Weighing Machine Co.
Schaffer Eng. & Equip. Co.
Sturtevant Mill Co.

WIRE AND WIRE FENCING.
American Steel & Wire Co.

WIRE ROPE.
American Steel & Wire Co.
Buckbee Co., J. C.
Leschen, A., & Sons Co.

What an Expert Says About Portland Cement

(In BETTER ROADS, Jan., 1914.)

...duced to bring the material up to t... ...ntent.

Cement rocks and shale are mixed in open quarries or in tunnels. Most of the cement quarries are open-faced, and the methods are those used in ordinary limestone quarries. Marls, where semi-dry, may be excavated by hand labor or by steam shovels, and where the material is very wet, such for example as lies at the bottom of lakes, it is excavated by dredges. Clays are excavated either by steam shovels or by pick and shovel. These various raw materials are brought to the mills where they are dried, weighed, and proportioned and then ground to a fine powder. The resulting raw mix is then burned in long rotary kilns, from which it issues in the form of clinker. This clinker is then ground to the impalpable powder known as Portland cement. As described, this process seems a simple and easy method of manufacture, but it is the reverse of this, for the production of Portland cement is an extremely scientific proposition requiring the exercise of the greatest care and long experience. It is a scientific and chemical procedure representing the antithesis of guess-work or slip-shod methods. Indeed, the present price of Portland cement seems most inadequate compared with the capital invested and the scientific effort essential for the manufacture of a first-class product. The illustrations accompanying this article show the various stages of manufacture.

Experience: ALPHA Portland Cement represents 24 years of experience. During all these years, the policy has been to make the highest and most uniform quality of cement that could be produced. The ALPHA Company has steadfastly declined to make a "good-enough" second grade. It has produced only one grade, that which stands everywhere for "the high-water mark of quality."

Care: Every boring in every ALPHA quarry is tested immediately. ALPHA chemists are always on the job, and their word is law. The raw materials are proportioned with the greatest care before the rock goes to the crushers. Hourly tests are made. The grinding and burning are supervised by chemical and efficiency engineers.

Result: Portland Cement that is guaranteed to more than meet all standard tests. Capacity, 25,000 barrels daily or 9,000,000 barrels yearly; storage for 2,000,000 barrels, thus insuring prompt shipments of seasoned cement at all times.

Now Then: We believe in CO-OPERATION and CONCENTRATION. Ask us to explain what we can do for YOU in YOUR territory.

ALPHA Portland Cement Company

Sales Offices: New York, Boston, Baltimore, Chicago, Pittsburgh, Savannah, Philadelphia, Buffalo **General Offices: Easton, Pa.**

Specify **ALPHA** and be SURE